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U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY
LABOR REVIEW

Vol. 27, No. 2 August, 1928

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UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON
1928

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Union scales of wages and hours of labor, May 15, 1927. Bulletin No. 457.

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A new test for industrial lead poisoning. Bulletin No. 460.

Park recreation areas in American cities. Bulletin No. 462.

IN PRESS

Safety code for mechanical power transmission. Bulletin No. 463

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LABOR REVIEW

VOLUME 27 NUMBER 2

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UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON
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This Issue in Brief

Two labor unions and a group of unionists of various trades have undertaken the construction of housing accommodations for their members. Two of these union projects, in New York City, have made available apartments for 1,488 families. The rooms of these apartments are all outside rooms, facing either on a street or on a central garden. What this means to the tenants may be realized when it is considered that many of them had been forced previously to live in the slums of the city. There are also eight union home-loan companies, six of which have financed the construction of at least 441 homes. Page 1.

A study of stability of railroad employment shows very wide variations as between occupations and also as between individual railroads. In 1927 clerks and telegraphers, of the six occupations studied, had the greatest regularity of employment, section laborers the least. Of the 10 roads covered, the Southern and the Louisville & Nashville showed the greatest employment stability in 1927 for the six occupations as a whole. In most of the occupations there had been an improvement in stability of employment between 1922 and 1927. Page 19.

Two new wage surveys by the Bureau of Labor Statistics covered the manufacture of aluminum, brass and copper wares and mills engaged in the making of brass and copper sheets, rods, tubes, wire, and shapes. The results give detailed hours of labor, and earnings by occupations and by States. Pages 122 and 130.

Substantial progress in the community recreation movement for the country as a whole was reported during the past year, both in the number of cities having organized recreation plans and in the number of trained recreation leaders. Recreation facilities for children and adults were reported by 815 cities in 1927 and the trained workers employed numbered nearly 20,000. In addition to these paid workers a large number of trained volunteers assist in carrying out the recreation programs. Page 60.

Bills of labor interest introduced in the last session of Congress covered a wide range of subjects. A summary of such bills, with their legislative history, is given on page 90.

The employee stock ownership movement has developed rapidly in the past few years, according to a recent report which lists 389 companies as having stock subscriptions plan in effect. It is estimated that approximately 1,000,000 wage earners own or have subscribed for stock in the companies in which they are employed, but although the aggregate holdings of the employees reaches a rather impressive total, the proportion of the stock held by them is not large, as a study of the plans of 20 companies which have well-worked-out plans showed that the average aggregate ownership by the employees amounted to only 4½ per cent of the total stock issue. Page 99.

The costs of medical and hospital care are generally regarded as being excessive and as placing an unfair burden upon the person of average

means. The operating costs secured from a number of large hospitals show, however, that the actual cost of hospital operation has not increased in the same proportion as the costs of other public services and that through more efficient care the average length of hospitalization has decreased so that there is very little difference in the average amount spent per patient at the present time and in 1913. The actual increase including the costs of special treatment is estimated to amount to only 29 per cent. Page 56.

Cost of living in the United States decreased 1.2 per cent from December, 1927, to June, 1928, and at the latter date was 70 per cent higher than in 1913, according to the regular semiannual survey of the cost of living by the Bureau of Labor Statistics. Page 186.

Poverty is the outstanding factor in all the social problems we are struggling to solve, according to Rev. Robert E. Lucey, D. D., president of the California Conference of Social Work. The poverty of the masses, he declares, is the direct and logical outcome of "our distorted industrial system." Social workers should study the industrial causes of dependency. Page 37.

A moderate degree of prosperity is noted in the consumers' cooperative movement. The progress of the north central and northeastern societies continues, and slow recovery from the reverses of 1920–1922 is noted on the Pacific coast. The miners' societies of Illinois, Ohio, and Pennsylvania, however, are under a heavy disadvantage due to the long-continued strike and consequent poverty of their members. Page 75.

The compulsory registration of unemployed persons in Italy is required by a recent royal decree. Under this decree employers are forbidden to engage unemployed workers not registered at the public employment exchanges, and the workers are forbidden to accept work without being registered. Page 87.

MONTHLY
LABOR REVIEW
OF U. S. BUREAU OF LABOR STATISTICS

VOL. 27, NO. 2 WASHINGTON AUGUST, 1928

Housing Activities of Labor Groups

THE provision of housing accommodations for trade-unionists has thus far received comparatively little attention from labor organizations.

There are, however, a number of organizations promoted by trade-unions for financing the construction of homes by their members. Of these the Bureau of Labor Statistics has data for seven.

One organization has been in existence since 1920, one since 1922, one since 1924, two since 1926, one since 1927, and one was organized just this year. Six of these building and loan associations have financed the construction of at least 441 dwellings.

So far as the bureau has been able to determine, only two unions have undertaken the actual construction of dwellings for their members. These are the Brotherhood of Locomotive Engineers and the Amalgamated Clothing Workers.[1] The operations of the former have been in the development of a town in Florida, constructing detached dwellings, mainly. Those of the latter have been in the construction of apartment buildings in the city of New York. In neither instance, however, is the purchase of dwellings confined to members of the union which has undertaken the housing work.

In addition to these strictly union undertakings, a housing project in New York City is being carried on by a group of trade-unionists from a number of trades.

Having provided themselves with quarters through their organization, the tenants of these union-constructed apartment houses in New York City have gone further and are filling their other needs cooperatively, buying milk, ice, electricity, groceries, meats, etc., collectively, and providing such other features as library, kindergarten, nursery, medical and dental care, gymnasium, playgrounds, etc., thus forming a more or less self-contained community of apartment dwellers.

[1] The Cloth, Hat, Cap and Millinery Workers' International Union has for some time been interested in the provision of housing accommodations for its members, but so far circumstances have prevented action in this field by the union.

Amalgamated Clothing Workers' Buildings

THE idea of the actual provision of dwellings for its members by the Amalgamated Clothing Workers was first broached at the 1924 convention. In 1925 a group of union members imbued with the cooperative idea formed the Amalgamated Clothing Workers Corporation for the purpose of purchasing ice and coal for the members of the Amalgamated Credit Union. The purchase of coal was in due time begun and is still being conducted.

This corporation which had been formed for the purchase of ice and coal was utilized in the housing project. Through it, purchase was made in April, 1925, of a plot of ground costing $315,000, and this organization has directed the entire housing project. Ground was broken on Thanksgiving Day, 1926; the first two buildings were ready for occupancy November 1, 1927, the third December 1, and the fourth December 15, 1927. A celebration of the first five buildings was held December 25. The sixth building was ready for occupancy some time in March, 1928, and work on a seventh is about to begin.

The union in undertaking this project was actuated by the desire to show that low rental housing was possible if undertaken by a group. Care was taken to secure a site which would give the advantages of the suburbs while at the same time being easily accessible to the downtown district.

Location of Buildings

The ground acquired for the project is in the Bronx on Mosholu Parkway opposite Van Courtlandt Park. As the corporation owns two blocks of land—some 50 lots, in all—the plans were drawn so that each apartment is an outside apartment facing on a street on at least one side. There are no rear apartments, and no apartment is more than two rooms deep.

The group of buildings has parks on three sides, and those families occupying the upper floors of the apartments have a view from their windows of Van Courtlandt Park, the waters of the city reservoir, and the palisades of the Hudson. The proximity of the parks means access to the tennis courts, ice skating, and other outdoor recreation and exercise made available by the park facilities.

The houses are so situated as to be reached by five minutes' walk from two subways. These give quick transportation to the clothing center in the downtown district where many of the tenants are employed.

Description of Apartments

As one of the predominant ideas was the provision of plenty of light and air, as well as play space for the children where they would be safe, the buildings are, roughly, in the form of a hollow rectangle. (Fig. 1.) Only 47 per cent of the ground is occupied by the buildings; the remainder is in lawns and playground space in an inner court 556 feet long which extends the full length of the property and varies in width from 51 to 100 feet.

They are five-story, walk-up apartments, the elevator being the only modern feature not installed. This was omitted in order to keep down maintenance and operating charges and to make low rentals possible.

The whole group of buildings contains 1,185 rooms in 303 apartments of from 2 to 7 rooms each, apartments of 3 and 4 rooms predominating. Each dining alcove is counted as a half room, and a kitchen is counted as one room, but kitchenettes (there are only three of these in the whole block of buildings) and the bathrooms do not

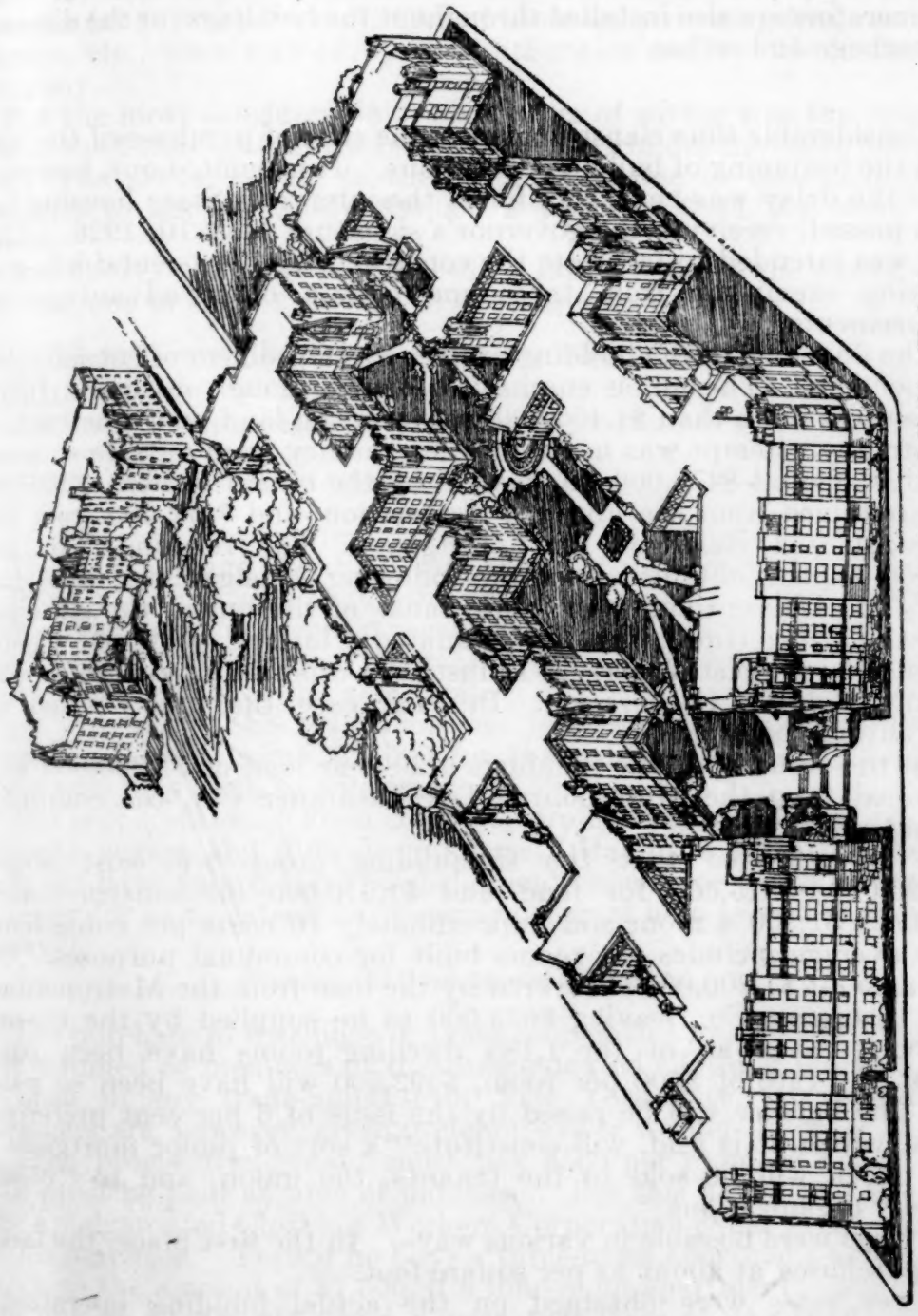


FIG 1.—Ground plan of apartment buildings of Amalgamated Clothing Workers

count as rooms. Some 14,000 square feet of floor space is allotted for communal purposes.

There are 29 staircases in the six buildings. In most cases, in order to insure privacy, there are only two dwellings on each landing, and in no case more than three.

The rooms are large, the average size of the living rooms being 12 by 17 feet, that of the bedrooms 11 by 15 feet, and that of the kitchens 8 by 12 feet. Each apartment is equipped with gas range, refrigerator, dumb-waiter, shower bath, and electricity. All floors are of hardwood. The buildings are heated by a central oil-burning furnace, which can, with slight changes, be converted to the use of coal. Incinerators are also installed throughout the buildings for the disposal of garbage and refuse.

Financing

Considerable time elapsed between the time of purchase of the land and the beginning of building operations. It is pointed out, however, that the delay was beneficial, for in the interval a State housing law was passed, receiving the governor's signature May 10, 1926. This law was intended to facilitate the construction of low-rental housing, offering exemption from taxes and certain other advantages as inducements.[2]

The financing of the building project was a problem of considerable proportions. The union emphasizes that although no union funds were used, more than $1,400,000 was spent on land and construction before any attempt was made to secure money from outside sources. Of this amount $479,000 was paid in by the tenant owners, $250,000 was obtained from the Forward Association, and $172,000 from the Amalgamated Bank on first mortgages. The remainder of the $1,400,000 was obtained from the following Amalgamated subsidiaries: The Chicago and New York banks of the union, the Amalgamated Center (Inc.), the Amalgamated Clothing Workers' Credit Union, the Russian-American Industrial Corporation, and the Paramount Holding Corporation. In each case the union acted as guarantor of the loan.

On the security of the buildings a 20-year loan of $1,200,000 was obtained from the Metropolitan Life Insurance Co., the company taking a first mortgage.

It is estimated that the six-building group will cost about $1,825,000—$315,000 for land and $1,510,000 for construction—or about $1,500 a room and approximately 40 cents per cubic foot. This average includes the rooms built for communal purposes. Of this amount $1,200,000 is covered by the loan from the Metropolitan Life Insurance Co., leaving $625,000 to be supplied by the tenant owners. When all of the 1,185 dwelling rooms have been paid for at the rate of $500 per room, $592,500 will have been so paid in. The balance will be raised by the issue of 6 per cent preferred stock, which, it is said, will constitute "a sort of junior mortgage." This stock will be sold to the tenants, the union, and to "other friendly organizations."

Savings were possible in various ways. In the first place, the land was purchased at about $2 per square foot.

Lower rates were obtained on the actual building operations because of the fact that the contractors, knowing that the work was a cash job, did not add the usual amount for financing. Competition between builders, because of this cash feature and the size of the project, also was a factor in reducing costs. The magnitude of the

[2] For the terms of this law see Labor Review, July, 1926, p. 77.

contracts is shown by the fact that the excavation and foundation contract totaled $180,000, masonry $279,000, plastering $167,000, and plumbing $134,000.

The loan from the Metropolitan Life Insurance Co. was obtained at a rate of 5 instead of the 5½ per cent customary for loans of this sort. This saving is estimated at $97,865 for the whole period of the loan (at $5,000 per year). All of the usual recording fees, revenue stamps, etc., were waived by the authorities and by the insurance company.

But the most considerable of all sources of saving was the exemption of the buildings (not the land) from taxes, under the State housing law. The actual saving to the corporation due to this exemption amounts to approximately $30,000 a year, or $2.11 per room per month.

How the $11 room was possible.—It is estimated that the yearly cost will amount to some $150,000, divided as follows:

	Per year
Operating cost (labor, light, heat, insurance, repairs, administration, etc.)	$47, 400
Interest	60, 000
Amortization of first mortgage (begins February, 1929)	20, 000
Taxes (land only)	5, 000
Dividends, at 3 per cent, on common stock	18, 000
Total	150, 400

This will average about $10.50 per month per room. As the rent is set at $11, it is seen that "the margin of safety is admittedly low and makes no allowance for vacancies." It is stated, however, that the 3 per cent dividend on common stock may be withheld for a few years; also that since the amortization of the first mortgage does not begin until 1929, the 1928 allotment for that purpose will create a revolving fund of some $20,000 for the redemption of the stock of those who may wish to withdraw.

The union states: "Financing this project was no paltry job. It brought vexing and difficult problems. Having met them successfully we have gained the knowledge and experience which will make it easier for us to extend our housing program here as well as in other cities."

Conditions of Ownership and Management

The purchase of dwellings in these cooperative apartment houses is not confined to members of the Amalgamated Clothing Workers, but is open to any trade-unionist in New York City. Amalgamated members are, however, given preference over workers in other trades.

Each prospective tenant must pay $500 per room, of which one-half must be paid at time of purchase. For this he receives stock in the Amalgamated Clothing Workers Corporation equal to the amount of his purchase. Thus if he buys a three-room apartment he receives stock to the amount of $1,500, if a four-room apartment, stock to the amount of $2,000, etc.; and a perpetual lease to the apartment of his choice.

In addition to this he pays "rent" of $11 per room per month. From the amount paid in in rents each month, a certain sum will be put away to pay off the mortgages, other amounts to cover expendi-

ture for repairs, renovations, etc. As the mortgages are paid off, in the course of time, the rents will be reduced.

In many cases the prospective purchaser was unable to gather together the $250 per room required as a down payment. In such cases, assistance was extended in the way of loans through the Amalgamated Bank, or the Amalgamated Clothing Workers Credit Union. The Jewish daily, Forward, also assisted materially by advancing an amount of $100,000 from which loans were extended to would-be purchasers.

In order to prevent speculation, a tenant who wishes to withdraw from membership in the corporation must sell his stock back to the corporation, which will allow him its book value at the time of withdrawal. Subleasing of apartments is prohibited.

Prospective tenants must be accepted by the stockholders' membership committee before being admitted to ownership in the apartments.

The affairs of the Amalgamated Clothing Workers Corporation are administered by a board of directors representing the tenant owners and including a representative of the State Housing Board.

The various activities within the buildings are managed by committees of five, elected by the tenants. There are three of these committees: The house committee, which looks after the operation and maintenance of the buildings; the business committee, whose duty it is to see to the buying of ice and milk, the running of the stores, the maintenance of the bus, etc.; and the social and educational committee, which arranges the social affairs, has supervision over the library, play rooms, etc. In order to coordinate the activities of these committees, the building committee has representatives on the other two.

Cooperative and Communal Activities

Cooperative purchasing.—As soon as the first two buildings were opened, steps were taken to supply the tenants with milk and ice, on a cooperative basis. A new organization, the Amalgamated Clothing Workers Service Corporation, was organized for the purpose. Because of the large purchasing power of this organization, with its 300 members, it has been able to effect substantial savings and to buy on a wholesale basis. After successfully undertaking the purchase of milk and ice, it began to buy eggs directly from the farmers, selling them to the tenants at a price considerably below the prevailing market prices.

Electricity is also bought in common, the corporation arranging for the installation of one large meter. "Because of the huge amount of electrical power registered on the one central meter the Edison Co. charges considerably less than it would for the same power if charged on 303 separate meters. The tenant owners pay to the Amalgamated Clothing Workers Corporation for power consumed by them." The consumption of the respective tenants is registered on submeters.

It is stated that this is merely a beginning. After the buildings are all occupied "the problem of cooperative purchasing will be tackled in earnest."

A grocery store, a meat market, and a fruit and vegetable store have already been started, all operated by the Amalgamated Clothing Workers Service Corporation. Shares of stock at $25 each are

being sold to the tenants, each of whom, it is expected, will take at least one share.

There are also on the premises a shoe-repair shop and a tailor shop, but the colony does not operate these, a concession having been let to a tailor and a shoemaker who are residents in the building.

Cooperative tea room.—In the basement of one of the buildings a large room has been fitted up as a tea room, with gaily painted tables and chairs, piano, etc. Here the members of the colony gather in the evenings for a general social time. Tea and refreshments are served, the members of a volunteer committee composed of the women of the colony taking turns in acting as hostess. A woman is engaged to come in late in the afternoon to make the place tidy and do the work necessary in connection with the serving of the refreshments.

Auditorium.—The land on which the fifth building stands drops 19 feet from one street to the other, and advantage has been taken of this for the construction of an auditorium seating about 500 people and having a large stage. Here movies will be shown, and lectures, plays, and entertainments of various sorts will be given. There is a kitchen nearby for the preparation of refreshments, a check room, and a rest room and lavatory for the women as well as one for the men.

Cooperative bus.—Because of the fact that the nearest public school is some three-fourths of a mile away, some means of transporting the children between school and home was thought desirable. Each tenant contributed $15 and a bus was purchased for the purpose. It is expected that some of the profits from the other cooperative enterprises will be used to help defray the expenses of operation of the bus. At present each tenant parent pays 25 cents per week per child for the upkeep of the car. This does not cover the whole expense but the remainder is made up from the earnings of some of the other cooperative activities.

Other communal features.—There is also to be a library in a corner room in the basement of one building, a music room, and a cooperative nursery under the care of a competent nurse. In another building there will be an indoor playground under a trained supervisor; a small outdoor playground is in course of construction.

It is intended to develop, from among the tenants, an orchestra under the supervision of a trained teacher. One feature of the common music room will be that here "all those youngsters who want to study piano playing, but who have been deprived of this joy until now because their parents could not afford buying them a piano" will find means to satisfy their desire.

After-school classes in Jewish history and in Yiddish are conducted for the grammar school children of the colony under the auspices of the Workmen's Circle (to which about 80 per cent of the residents belong). This organization pays a rental for the use of the room where the classes are held, as well as supplying the teacher.

Further Housing Activities

The union announces that it will probably undertake the construction of additional houses, provided suitable land can be obtained. At the banquet held December 25, 1927, to celebrate the formal opening of the buildings, President Hillman stated that the organization is already planning another project which will provide housing

accommodations for about a thousand more families. The site for this project will probably be in a crowded section of the city, somewhere on the lower East Side.

Attitude of the Union

These buildings give the tenants access to housing conditions that would ordinarily (because of expense) be closed to them, at rents which they can afford to pay. Of the membership now in the buildings, about one-third have come from the lower East Side, about 35 per cent were already living in the Bronx, and the remainder have come from other parts of the city and from Brooklyn.

About one-third are members of the Amalgamated Clothing Workers, one-third are members of the International Ladies' Garment Workers' Union, and the remaining third are workers from other unions.

The union took the position that slums are not an unavoidable evil of city housing, and actuated by the desire to bring its members, so far as possible, out of the slums into light, airy, sunny dwellings, has demonstrated what collective effort can do. The step was not taken without opposition within the organization. President Hillman points out:

> Our organization, like all groups of human beings, includes two types of people. On the one hand, there are those who believe that we should leave well enough alone, limit our usefulness to the spheres where everything has been tried and is certain; they fear anything new, not realizing that what is accepted to-day was new and uncertain at some earlier time. The others are impatient for new things, anxious to fly even before they have learned to walk. It is the good fortune of our organization that the great bulk of its people have steadfastly adhered to a policy of careful, if at times slow, forging ahead. Through this policy some of our dreams of yesterday are part of our actual life to-day. The soundness of this state of mind and attitude of the largest group in the organization is proved by our achievements, both the volume of them and their character. The Amalgamated has always laid stress on results as soon as it was certain of what it wanted. We have always pursued that course regardless of criticism and no matter from where it came.

It is realized that, in view of the magnitude of the housing problem in New York City, what has already been achieved is but slight. Pointing out that there are over 40,000 members of the union in New York City and 700,000 wage earners in the New York metropolitan district, the union admits that "the six apartment houses are not even so much as a drop in the bucket of the current need. They are not so much as an approach to the solution of the housing problem."

Furthermore, the condition of participation in the venture, an $11 a room monthly rental, and a capital investment of $500 per room is quite high for the mass of workers even though it is so much less than what constitutes the rent in buildings of inferior quality erected by private companies, and is also considerably lower than the rent which cooperating tenants pay in other labor cooperative apartment houses in the city. The Amalgamated could not possibly have undertaken to build healthy, beautiful homes, at a cost compatible with the earnings which prevail in industry to-day. Workers' earnings are, on the average, way below what is the minimum of healthy and decent living. The Amalgamated in common with the other labor unions carries on an unceasing struggle for a healthy human standard of living, and the struggle is far from being close to a happy ending. Workers in the men's clothing industry may be somewhat better off than workers in many another industry and that condition of comparative improvement they have achieved because of their progres-

sive, solidly built, and carefully guided, militant organization. The first problem of the workers in the United States is that of improving their earnings. In the measure as this problem is met and achieved, an approach may be made to a solution of a string of secondary problems such as housing, cooperative purchasing, etc.

The significance of the Amalgamated project, it is claimed, lies in the challenge, the "friendly challenge," it presents to other labor bodies.

The project now realized by the Amalgamated puts the issue squarely before the people of the State and of the Nation. It tells the workingmen of the United States that if they expect relief from the State or from any national or local public agency they expect what they may never get—unless they mobilize their own strength and take the problem into their own hands.

We have shown you that a union can mass the savings or the prospective savings of union members into a considerable body of capital. A union could make constructive and profitable use of the accumulated strength, standing, and credit capacity of its members and the union itself. The union can get the voluntary cooperation of competent socially minded people in many walks of life and put their individual abilities into the service of the labor movement as a whole. The union, if it so chooses, can find the necessary means and command the necessary competence to materialize a project, which, in the regular run of things, it is assumed, can be done only by the rich for personal profit and aggrandizement. The union can do this thing and many another thing and the labor movement has no justification in keeping away from undertaking large-scale enterprise only because it has no money and does not know how to do things. Where there is a will there is a way.

We believe that the coming year will show other groups of cooperators in housing among the members of the Amalgamated, and that in a very few years, not only in New York but in other cities where the clothing industry exists, the members of the Amalgamated will be housed in dwellings of a very different character from what they have been compelled to live in for the last generation. And they will have made this possible by their understanding of what they can accomplish by acting together.

United Workers' Buildings

A NUMBER of years ago a small group of workers leased one floor in a house in New York, on a cooperative basis. As the group increased the whole house was taken over, and certain social features were added and a summer camp was started. These proved so popular that the field of activities has been broadened until to-day the United Workers' Cooperative Association is perhaps the largest and most active cooperative group in New York City.

Early in 1925 the association purchased an entire city block facing Bronx Park. Since that time additional land has been bought, until now the organization owns six blocks of land, on two of which cooperative apartments have been built.

The first group of apartment buildings contains four units surrounding a large central garden. These four units contain 339 apartments, totaling 963 rooms. The individual apartments range from two to five rooms, the majority being those of three rooms. The second and third blocks are built in the form of an E, the second containing 354 apartments (1,054 rooms), and the third and fourth units 492 apartments (1,450 rooms). Thus, it is seen, this association has already provided living quarters for 1,185 families.

Plans are under way for still more buildings which, it is expected, will be ready in the course of a year. These are five-story, walk-up apartments. As no wing is more than two rooms deep, this means

that every room looks out either upon a street or upon the interior garden. Special care has been taken in the arrangement of the rooms so as to secure cross ventilation in every apartment. In no case do the buildings occupy as much as 50 per cent of the ground space.

The living rooms average 12 by 16 or 12 by 17 feet, and the bedrooms are 11 by 15 feet in size. Each kitchen is equipped with gas range, refrigerator, and dumb-waiter, and the bathroom with a shower.

One section of the first group of buildings contains the "bachelors' quarters," that is, single furnished rooms. Each three of these are provided with a bathroom, and there is a common kitchen for every 12 rooms.

The buildings are heated by oil from a central plant in each block. In the first building four incinerators were installed, one for each unit, the garbage being collected from the various apartments and burned here. In the later buildings each hall has a chute connecting directly with the incinerator, thus saving the process of collection.

Although staircases are expensive, there are many entrances to the buildings. Since the buildings are only two rooms deep the long halls, which would be necessary if there were only a few entrances, would divide the rooms and either would have to be dark or would take light desired for the rooms themselves.

Landscaping.—The inner garden of the first block of buildings is laid out a good deal like that of the Amalgamated Clothing Workers' group. As the buildings of this block occupy only 46 per cent of the total ground space of a whole city block, it is seen that the garden is a spacious one. In the center there is a grassy mound on the top of which the association plans to have a piece of sculpture. Many walks are laid out in the garden leading to the numerous entrances to the buildings and to the fountains (each with its pool) one of which is located at each end of the court.

In the central space between the wings of the second group of buildings the association plans to have what the president calls "a river 200 feet long." A wide, long, concrete basin will be constructed; the water will flow in at one end and out at the other, being forced back to the beginning by a suction device, and being used over and over again.

As one side of the block where operations will next be started is solid rock, it was decided not to remove this but to use it as part of the general landscape scheme, building the apartments around it at the back and using the rock for terraces and steps leading up to the buildings.

Financing

The land used for these buildings cost $450,000, and the construction of the buildings $3,000,000. For the first block of buildings, which cost $1,600,000, each prospective tenant was required to pay $250 per room, of which half was a down payment, the balance being payable in the course of a year. In this way $250,000 was raised. A loan of $1,100,000 was obtained from the New York Title & Mortgage Co., and the remainder by a 6 per cent gold bond issue of $250,000. Succeeding operations are being financed through a subsidiary organization, the Consumers' Finance Corporation, in the same way. The loan from the insurance company constitutes a first mortgage and the bond issue is in the nature of a second mortgage.

This, it is seen, is a procedure similar to that followed by the Amalgamated Clothing Workers in their building project.

The cost of construction has averaged $1,500 per room, and about 40 cents per cubic foot.

The association was not able to meet the requirements of the housing law, so as to be able to obtain the 20-year exemption from taxation in the construction of the first two blocks, but an effort is being made to do so in the case of the third and fourth blocks.

Rents are $14 and $14.50 per room, the amount varying according to the floor on which the dwelling is located, whether the apartment faces the park, or street, etc. In calculating the rents, neither kitchenette nor bathroom is counted; full rent is paid for a kitchen, however, for this is regarded as a room.

The 1927 report of the association shows the following gross income:

Rentals of real estate department (10 months)	$161,088
Camp Nitgedaiget (Beacon, N. Y.)	113,558
Nine stores (4 months)	88,740
Finance corporation (interest, income)	5,335
Ice business (5 months)	3,875
Kindergarten (4 months)	2,426
Medical center (3½ months)	1,734
School (4 months)	1,437
Literature	1,255
Dental clinic (2 months)	761
Lectures (3 months)	557
Gymnasium (3 months)	350
Total income	381,116

The report shows resources of $4,299,341, of which more than four million dollars is in real estate. Working capital and earned surplus aggregated $673,640.

Conditions of Ownership

As already stated, each prospective tenant must pay in $250 per room, and a monthly rent of $14 or $14.50 per room. Each tenant is required to be a member of the union of his trade, unless excused by insurmountable obstacles.

Unlike the ordinary cooperative procedure, the member-purchaser in one of the United Workers' cooperative apartments receives no stock in the enterprise; he gets a receipt for the amount paid in and a two-year lease to the dwelling. At the end of two years, if he is still acceptable to the other tenants, his lease is renewed; if not, he must leave, in which case his principal is returned, without interest, minus his proportional share of the cost of redecorating the apartment for a new tenant. Subleasing is not allowed; a tenant leaving for any reason before his lease expires must turn his apartment back to the association.

There is a board of 25 unpaid directors which manages the affairs of the association, and these directors also serve on various committees having to do with the community. Subcommittees are appointed by these committees from among the membership and much of the actual work of the conduct of the buildings and the various community projects is done by these subcommittees. The association encourages as many residents as possible to serve on the various subcommittees; this is done on the assumption that the more work done by the individual the greater his interest and pride in the whole project will be.

Cooperative and Communal Features

There are a number of community activities carried on by the association in the endeavor to produce a self-contained community. Many of these activities are housed in the spacious light basement rooms, the first floor of the buildings being some 10 or 15 feet above the street level. These communal projects include:

Kindergarten and day nursery.—This department occupies three rooms in the southwest basement corner of the first block of buildings. These rooms are furnished with a piano and brightly painted furniture of children's size, and are made even more cheerful and attractive by gay pictures and by window boxes with flowering plants. Here four full-time teachers are employed for the care of 58 children of preschool age who come here. A child may attend for one session of four hours in the morning, for two sessions of four hours each, or may be left (as in the case of children of mothers who are employed during the day) from 7 a. m. till 7 p. m., receiving three meals. Since the projects must be more or less self-supporting, a charge of $3 per week per child is made for those who attend for only one session a day, $6 for those attending two sessions, and $9 for the full-day children. The children have a dining room and lavatory in connection with the nursery. For those who attend during the whole day, there are little lockers to hold the bedding used during the "nap" period. As the space here will not be sufficient to accommodate all the preschool children in the colony when the new buildings are occupied, a similar kindergarten is planned for one of the new buildings.

Classrooms.—Two basement rooms have been equipped with school desks (more than 50 in all) and here are held after-school classes for an hour several times a week. These classes are for the children of grammar-school age, and they are taught Yiddish and Jewish history. For the adults of the colony, there are evening classes in English.

In connection with the classrooms there is a waiting room, lounging and lavatory rooms for the boys, similar rooms for the girls who attend the classes, and a cloakroom.

Cooperative society for young people.—The young people of the colony have what they call a "youth cooperative" which arranges for lectures, discussion groups, and various recreational activities—concerts, entertainments, hikes, etc. This society has been given the use of two rooms, divided by a collapsible partition which folds back making the two rooms into one. One of the rooms has a raised stage at one end.

Library.—A community library is installed in one of the buildings. The library room, which is a corner basement room receiving plenty of light, is fitted up with library tables and chairs, several thousand volumes (which are being catalogued by volunteer work), and a periodical rack and a newspaper rack, both well filled. The equipment for the records and other uses of the librarian is very good. Several good (some striking) pictures hang on the walls and there are several busts of distinguished men.

Assembly hall.—The hall now being used as an assembly hall is small, holding only about 200 persons. This, however, is being used

only until such time as the new auditorium is completed. The land on which one of the new buildings stands drops some 22 feet from one street to the next and this slope is being utilized to build a large and complete auditorium.

Gymnasium.—There is a large gymnasium containing the usual "gym" equipment, as well as a piano. Adjoining it are a shower room, locker room, and room for steam baths.

Health clinic.—A suite of rooms on the first floor of one of the first block of buildings is reserved for the health clinic. Here are waiting room, doctor's office with laboratory adjoining, and dentist's office with adjoining dark room. All are furnished with the best modern appliances. The doctor has office hours three days a week; for this he receives a regular salary from the association of $500 per month. The association in turn charges the members $3 per visit for his services. In order, however, to meet the need of persons with only slight ailments, the association has engaged a less experienced physician for whose services a fee of $1 per visit is charged.

The dentist's office contains two chairs, one for the use of a dentist who does part-time work for the association, and the other for the use of a woman dentist who specializes in children's work.

Playground.—A short distance away from the buildings, on a separate plot of ground, there is a well-equipped playground for the colony children. The ground is surrounded by a high wire fence, and a charge of 25 cents per child per week is made for its use. This charge goes for the upkeep of the playground and equipment. Cards of admission are issued, a different color being used each week.

Cooperative stores.—Twenty-five thousand dollars' worth of stock of the Consumers' Finance Corporation was set aside for the operation of community stores, and this stock is being sold to members of the association who wish to become members of the store group. In its own building located several blocks distant, the association now has in operation seven enterprises—a grocery store, meat market, fish market, vegetable store, delicatessen, laundry, and restaurant.

Any profits from these operations will not be rebated to the purchasers but will be used for community purposes, as under the Belgian cooperative system.

Gas and electricity are purchased by the association on one big meter, a monthly charge being made by the association to the tenants at a fixed rate per room. Ice and milk are also bought cooperatively.

Some of the members of the colony have started a cooperative restaurant on Union Square, as well as a cooperative shoe store, also in the downtown section of the city.

Labor Policy

This group of cooperators has a well-defined labor policy. As already stated, all members must be trade-unionists, and this requirement is carried out wherever possible in the business dealings of the association, only union firms being dealt with. All the construction work on the buildings must be done by organized labor and the materials must be supplied by union firms. The association has insisted that even the common laborers employed must be union men.

The employees in the cooperative stores, restaurant, and laundry are all members of their respective unions, as are also the teachers in

the kindergarten. In one instance the association has been responsible for the unionization of a formerly open-shop business. A milk dealer who desired the patronage of the colony accorded recognition to the union of his employees, upon the demand of the cooperative.

Locomotive Engineers' Project

HOUSING and land development on a large scale have been undertaken in Florida by the Brotherhood of Locomotive Engineers. The brotherhood several years ago purchased several parcels of land totaling more than 50,000 acres. Here land was cleared and the foundation of a planned city laid out, the services of a city planner being engaged for the purpose. A small town has been built there, which is surrounded by an agricultural area laid out in farms of 5 and 10 acres each. The brotherhood operates three hotels for the accommodation of tourists and visitors and two model farms, and has constructed a nine-hole golf course with clubhouse. Its total investment there is understood to aggregate some $16,000,000.

No detailed data are available as to the methods in use in the building and sale of the houses.

Home-Finance Companies of Trade-Unions

ALTHOUGH the Brotherhood of Locomotive Engineers and the Amalgamated Clothing Workers of America are thus far the only labor organizations which have undertaken the direct task of themselves constructing homes for their members, in certain other instances labor unions are giving encouragement to home ownership by their members. This they are doing by making construction loans. There are at present eight such home-loan companies of whose existence the Bureau of Labor Statistics is aware, and the bureau has some data for seven of these. Summary data concerning these seven are shown in the table below:

OPERATIONS OF UNION HOME-LOAN ASSOCIATIONS

State	Number of organizations	Number reporting	Number of shareholders	Paid-in share capital	Surplus and undivided profits	Number of homes financed	
						Last year	Since organization
Florida	1	1	(1)	(1)	(1)	18	(1)
Illinois	1	1	(1)	$800,000	$12,000	(1)	46
Minnesota	2	1	1,100	211,000	713	31	150
Ohio	3	3	[2] 2,461	1,432,410	[3] 4,800	[3] 15	[3] 220
Texas	1	1	571	23,755	340	13	13
Total	[4] 8	7	[4] 4,132	[5] 2,467,165	[4] 17,853	[4] 77	[6] 423

[1] Not reported.
[2] 2 associations only.
[3] 1 association only.
[4] 4 associations only.
[5] 6 associations only.
[6] 5 associations only.

Florida

It was reported to the 1927 convention of the Florida Federation of Labor that the unions there have organized a building and loan company which during 1926 financed some 18 homes for union men "and is one of the best financed and most solvent building and loan

companies in the State." Repeated inquiry by the Bureau of Labor Statistics has failed to elicit any response from this company and detailed data concerning it are therefore not available.

Illinois

The Illinois Federation Corporation was started in March, 1926, by leaders of the building-trades unions in Chicago. It was originally capitalized at $550,000, but grew so fast that its capitalization was increased to $1,100,000. Its stock is divided into 10,000 shares of preferred stock at $100 each and 10,000 shares of common stock at $10 each. These are offered in blocks of one share of common and one share of preferred stock paying 8 per cent interest. Only trade-unionists or labor organizations may become shareholders. It was originally intended to limit membership to members of the building-trades unions, but later membership was thrown open to all organized workers in Chicago. In October, 1927, the subscribed capital amounted to about $800,000 and surplus and reserves had been accumulated in the sum of $12,000.

It is explained that the corporation was started with the following purposes in view:

1. To encourage thrift among trade-unionists.
2. To provide a sound business in which to invest their savings.
3. To encourage the ownership of homes by trade-unionists by providing funds for the erection of homes.
4. To increase the employment of union labor.

A unionist desiring to own his own home can secure from the corporation a loan of an amount equal to two-thirds of the value of the dwelling planned, the corporation taking a mortgage on the property. For this he pays interest of 6 per cent, plus 3 per cent discount. (Nonunionists must pay the regular rate of interest.) Each borrower must sign a contract with the company binding himself to employ only union labor in the construction of the house.

The corporation superintends the building operations, making inspections several times a week to see that the prospective home owner is getting the materials and work that he is paying for. From the time of its establishment to October, 1927, the organization had financed the construction of 40 buildings.

The corporation is indorsed by the building trades council of Chicago and some of the organizations belonging to the council own stock in the corporation. It is governed by a board of directors and an advisory council representing the building trades and other labor organizations of Chicago.

The Amalgamated Clothing Workers, in the Advance of March 16, 1928, reports that its Chicago bank has organized a subsidiary company, the Amalgamated Securities Corporation, for the purpose of making second mortgage loans on properties the first mortgage on which is held by the bank. "This corporation will facilitate the financing of home building by members of the Amalgamated and workers generally."

Minnesota

In February, 1922, the Central Labor Union of Minneapolis (composed of some 100 local labor unions) formed the Union Building &

Loan Association.[3] The circumstances leading to the formation of the association are described by it as follows: "Money for home-building purposes was very scarce, loan companies that had funds for home loans were insisting that the builders of these homes work on the American plan, or in other words, open shop or a shop closed against the employment of trade-union members. Also a great number of people who wished to have a home of their own were handicapped by not being able to get funds for that purpose."

The association now has about 1,100 members, mostly trade-unionists, its paid-in capital amounts to $211,000 and its surplus to $713. Receipts for 1927 amounted to $141,015.

Since its formation in 1922 the association has financed the construction of 150 homes, of which 31 were built during 1927. The rate charged on loans averages 5 per cent net over the period of the loan.

There is also a union building and loan association in St. Paul, but the Bureau of Labor Statistics has been able to secure no information concerning it.

Ohio

The trade-unionists of Ohio have three home-loan organizations, the Federation Savings & Loan Co. and the American Home Builders, both of Cleveland, and the Trades-Union Savings and Loan Association of Cincinnati.

The Federation Savings & Loan Co. was started in March, 1924. At first only the building-trades unions were interested in the project, but now the organization has the indorsement of all the American Federation of Labor unions in the city. The organization is incorporated under the Ohio laws which permit it to receive savings deposits. It also issues membership certificates payable over a period of years like other building and loan associations. Its stock is held mainly by unionists, but a few nonunionists are also members. In March, 1927, its outstanding stock amounted to some $600,000; by October, 1927, its resources aggregated $1,600,000.

Like the Illinois Federation Corporation, the Federation Savings & Loan Co. lends its funds to workers desiring to own their own homes; and like it, requires a written contract pledging the employment of union labor in the construction of the house. The borrower must also be a member of the organization. Nonunionists may receive assistance from the company's funds, but unionists receive preference in the making of loans. Interest is charged at the rate of 7 per cent. The loans made average about $4,000 per loan, which represents about 55 per cent of the market value of the property on which the loan is made.

Stockholders receive 8 per cent on their certificates. Depositors receive interest at the rate of 5 per cent on demand deposits and 6 per cent for time deposits. In order to insure the absolute safety of the funds deposited with it, the company is bonded with a surety company. The stock of the company carries double liability, which provides an additional guaranty of safety to depositors.

[3] Name since changed to Aetna Building and Loan Association, because of similarity of name to other associations in the vicinity which have no connection with organized labor.

The board of 30 directors which administers the affairs of the company is representative of nearly all the building trades.

Officials of the Brotherhood of Railroad Trainmen late in 1925 established the American Home Builders, which began business in February, 1926. This company was organized with an initial capital of $1,000,000 divided into 100,000 shares of preferred stock paying a 7 per cent cumulative interest, at $10 par value, and 50,000 shares of no-par-value common stock. This stock was offered in blocks of five shares of preferred and one share of common stock for $55, the common stock selling for $5 per share. In October, 1927, the company had about 2,000 shareholders, including 141 local labor organizations, most of which were lodges of the Brotherhood of Railroad Trainmen. The international brotherhood itself has no money in the company, although some of its officials are directors and officers of the company. The paid-in share capital of the company in January, 1927, amounted to $632,410.

The purposes of the American Home Builders are announced to be (1) the financing of the construction of workers' homes, (2) the making of small loans on personal indorsement, and (3) eventually the establishment and control of a chain of small-loan banks throughout the United States. As regards the first purpose, Mr. Lee, then president of the trainmen's organization and chairman of the board of directors of the company, was quoted, shortly after its formation, as follows:

> Capital admits its failure to meet the housing crisis. The shortage of housing for people of small means, the steadily mounting rent schedules, and the small proportion of home owners among our workers constitute a menace to the social order. We believe that this crisis can not be met effectively unless and until the workers are brought to realize that the housing problem is their own problem and that with their combined savings they can ease their own burdens and eventually bring to a reality the ideal of a home for every worker.[4]

Since its formation the company has financed the construction of 102 houses, to the amount of $276,515, taking mortgages (mainly second) on the property as security. In addition, during 1927 it made personal loans to 266 borrowers aggregating $47,817.

The company has established a branch organization, the Northwest American Home Builders, at Seattle, Wash., with an authorized capital of $400,000. It paid its first quarterly dividend July 1, 1927. The American Home Builders also owns the controlling interest in a subsidiary organization, the Continental Bank, in Cleveland.

Thirty-seven local unions in Cincinnati, in the fall of 1920, established the Trades Union Savings & Loan Association, beginning with deposits aggregating only $400. Since that time the organization has grown until its financial statement of November 25, 1927, shows assets of more than $160,000 and reserves and undivided profits of $4,800.

It is stated that "The association is owned and controlled by union labor. All our officers and directors are members of labor unions. All our loans are made to members and friends of union labor. We specify that all homes built on our loans shall be built by union labor."

[4] Locomotive Engineers' Journal, April, 1926, p. 277.

For its loans the association charges 6.24 and 6.75 per cent. (Deposits receive 5 per cent interest.) Since the formation of the association it has financed the construction of 118 homes, 15 of which were built last year.

Texas

In March, 1927, 100 trade-unionists of Houston, Tex., organized the Union Building and Loan Association, with an authorized capital of $10,000,000, divided into shares of $100 each. Each of these 100 unionists pledged a subscription of $1,000, paying $5 down and agreeing to pay a similar amount each week for 128 weeks.

During the year that has passed since its organization the association has financed the construction of 13 houses, making loans for this purpose of $16,987. It charges 8.4 to 9 per cent on loans, these being made on first mortgages in an amount not to exceed two-thirds of the appraised value of the property. The borrower must also pledge with the association the stock certificates owned by him.

The organization now has 571 stockholders—all of whom are trade unions or their members—paid-up capital of $23,755, and a surplus of $340. On March 8, 1928, the total resources of the company amounted to $24,687.

Stability of Railroad Employment

By Walter H. Dunlap

THE purpose of this study was to measure the degree of regularity of employment among railroad employees and to ascertain whether there had been any improvement in this respect during recent years. The study thus had to deal with individual occupations on individual railroads. Combined data are of little value for this purpose. The total number of employees of a particular road may be about the same from month to month, while at the same time there are wide variations in employment in individual occupations. Thus an increase of section laborers in the spring may be balanced by a decrease in machinists and other shopmen, and an increase in engineers and firemen in the fall may be balanced by a decrease in section laborers. As there is practically no transfer of employees between departments—i. e., a section laborer can not get work as a machinist nor a machinist as an engineman—the stability of a worker's job depends on the stability of employment in his particular occupation.

In a similar way, monthly figures of employment for all Class I roads would be of little value in a study such as this, for roads in one part of the country might be laying off employees at about the same time that roads in another part of the country were taking on additional men. It is possible that some workers when thrown out of employment in one part of the country migrate to another part.

The basic data for the study were obtained from the files of the Interstate Commerce Commission. Every operating railroad furnishes the Interstate Commerce Commission a monthly statement giving for each occupational classification the average number of employees during the month and also (except for the train and engine crews) the number of equivalent full-time positions. Reports of this character have been made since July, 1921. The resulting material is so voluminous that for the purpose of the present study it was necessary to select a limited number of occupations and railroads. The occupations selected were clerks (Class B), section laborers, machinists, telegraphers, road freight firemen, and yard brakemen, it being felt that these six occupations are fairly representative of the major classes of railroad labor. The railroads selected were the New York Central Railroad Co., Pennsylvania Railroad Co., and Baltimore & Ohio Railroad Co., in the eastern district; Southern Railway Co. and Louisville & Nashville Railroad Co., in the southeastern district; Chicago, Milwaukee & St. Paul Railway Co., Great Northern Railway Co., and Chicago, Burlington & Quincy Railroad Co., in the northwestern district; and the Atchison, Topeka & Santa Fe Railway Co. and the Southern Pacific Railroad Co. in the southwestern district. The choice of railroads was dependent to some extent upon the completeness and uniformity of their reports, but on the whole the 10 roads listed are probably as representative as 10 roads can be of the different conditions of climate, traffic density, and operating management existing in the United States. Except for machinists, the period studied covers the six years from 1922 (the earliest full calendar year reported on in the present detail) to 1927. In the case of machinists the data for 1922 are omitted, as the shopmen's strike of that year seriously affected the employment of machinists on most of the roads included here.

Index of Employment Stability

THE method of measuring employment stability here used is that of the relationship of average monthly employment during the year to the number of employees (or full-time positions) in the month of maximum employment. Thus, if during 1927 a particular occupation had a monthly average of 80 employees and the maximum number in any month was 100, then the stability of employment may be fairly said to be 80 per cent. In other words, if the 100 men needed to fill the position at the busiest season had no other opportunity for work, then each man would have an opportunity of 80 per cent of full-time employment. Of course, this is rarely quite true, but it is often substantially true; and, in any case, the method offers a fairly accurate measure of the degree in which a particular railroad or establishment has attained a condition of stable employment. On the other hand, failure of a railroad or establishment to obtain a good level of stability in one or all occupations must not necessarily be attributed to faulty management. Many factors over which the management has little or no control may affect the stability of employment. Nevertheless an employment stability of or very near 100 per cent is the desirable goal.

The measure of employment stability just described has been used in this study because it is simple and clear. Somewhat more accurate measures of a mathematical character could be employed, but what they gain in accuracy is more than overbalanced by complexity in computation and explanation.

Employment Conditions in 1927

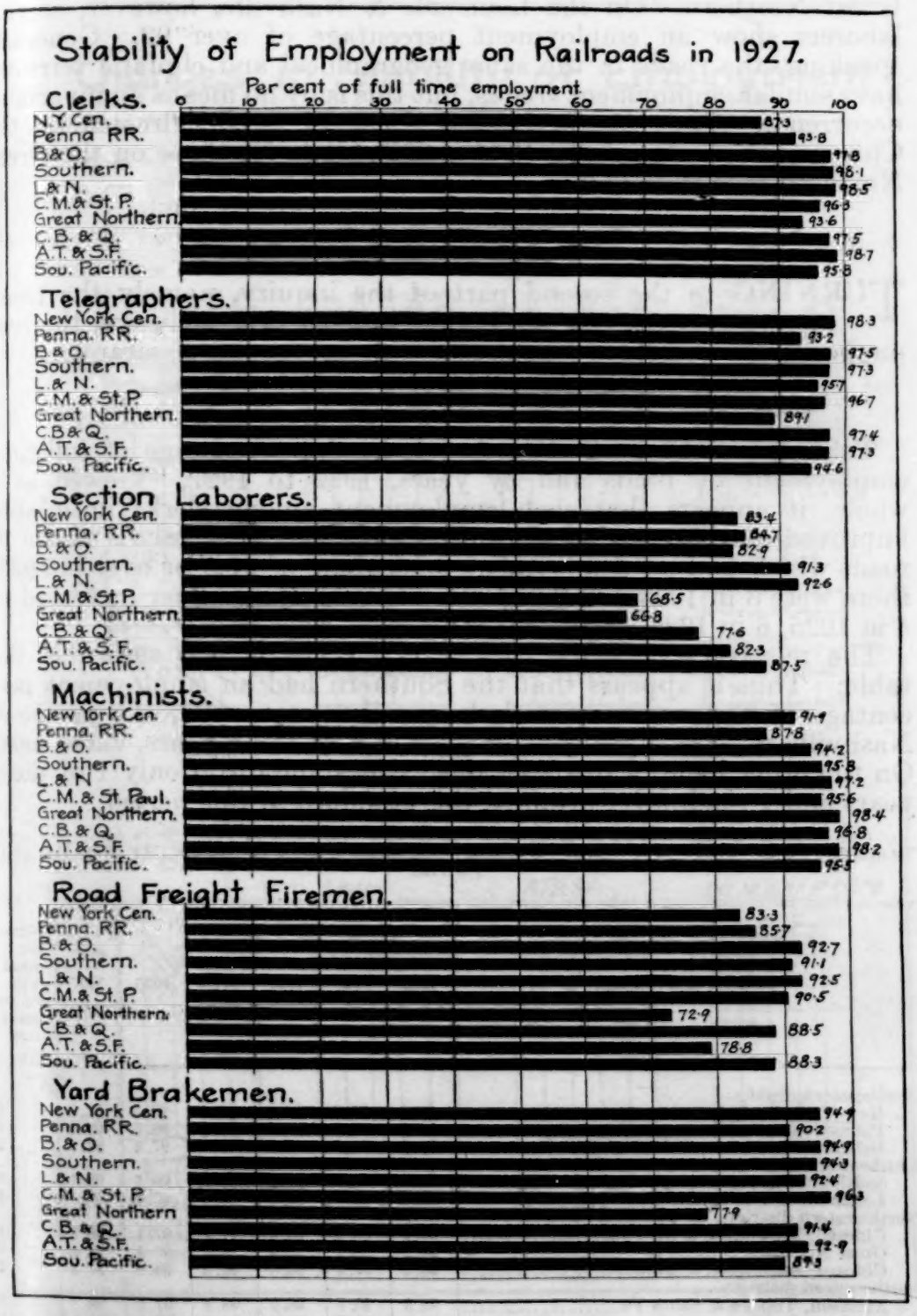
TABLE 1 and Chart 1 show the percentage of full-time employment in 1927 for each of the six selected occupations on each of the 10 selected railroads. The average percentages shown in the table indicate that the clerks and telegraphers, with an average percentage of 95.7 had the best opportunity for employment, closely followed by the machinists with an average percentage of 95.1. The next best showing is for yard brakemen (91.4 per cent), while the road freight firemen drop to 86.4 per cent and the section laborers to the low figure of 81.8 per cent.

TABLE 1.—PER CENT OF FULL-TIME EMPLOYMENT IN 6 SPECIFIED OCCUPATIONS ON 10 SPECIFIED RAILROADS, 1927

District and railroad	Clerks	Telegraphers	Section laborers	Machinists	Road freight firemen	Yard brakemen
Northeastern district:						
New York Central	87.3	98.3	83.4	91.9	83.3	94.9
Pennsylvania	93.8	93.2	84.7	87.8	85.7	90.2
Baltimore & Ohio	97.8	97.5	82.9	94.2	92.7	94.9
Southeastern district:						
Southern	98.1	97.3	91.3	95.8	91.1	94.3
Louisville & Nashville	98.5	95.7	92.6	97.2	92.5	92.4
Northwestern district:						
Chicago, Milwaukee & St. Paul	96.3	96.7	68.5	95.6	90.5	96.3
Great Northern	93.6	89.1	66.8	98.4	72.9	77.9
Chicago, Burlington & Quincy	97.5	97.4	77.6	96.8	88.5	91.4
Southwestern district:						
Atchison, Topeka & Santa Fe	98.7	97.3	82.3	98.2	78.8	92.9
Southern Pacific	95.8	94.6	87.5	95.5	88.3	89.3
Average, all 10 roads	95.7	95.7	81.8	95.1	86.4	91.4

When individual roads are examined, certain striking contrasts appear. The Southern and Louisville & Nashville stand out with employment percentages of over 90 in all occupations. Also it might

CHART 1



be noted that the Baltimore & Ohio and the Chicago, Milwaukee & St. Paul show percentages of over 90 in all occupations except section men.

Similar striking contrasts appear when the individual occupations are examined. The clerks and telegraphers show generally high percentages, but in one case the clerks' percentage drops to 87.3 and the telegraphers' to 89.1. Section laborers, on the other hand, have very low percentages on some roads, the lowest being 66.8 for the Great Northern. On the Louisville & Nashville, however, section laborers show an employment percentage of over 92. Generally speaking, the roads in the same geographical and climatic territory have similar employment trends, but this is by no means an invariable occurrence. Thus the percentage for road freight firemen on the Chicago, Milwaukee & St. Paul is 90.5, while for those on the Great Northern it is only 72.9.

Trend of Employment, by Years

TURNING to the second part of the inquiry, namely the trend of employment over the period 1922 to 1927 inclusive, the best method of procedure is to consider each occupation separately.

Clerks

Table 2 and Chart 2 show for clerks the percentage of full-time employment by roads and by years, 1922 to 1927. Viewed as a whole, it appears that such employment among clerks noticeably improved over the period shown. Thus there were only 2 of the 10 roads which had an employment percentage of 97.5 or over in 1922; there were 3 in 1923 and 2 in 1924, whereas this number increased to 5 in 1925, 6 in 1926, and 5 in 1927.

The relative standing of the several roads is also shown in the table. Thus it appears that the Southern had an employment percentage of 97.5 or over for clerks in all 6 years. The Louisville & Nashville with 97.5 per cent or over in 4 of the 6 years, came next. On the other hand, 3 roads attained this standard in only 1 of the 6 years and 1 road never attained this standard in this period.

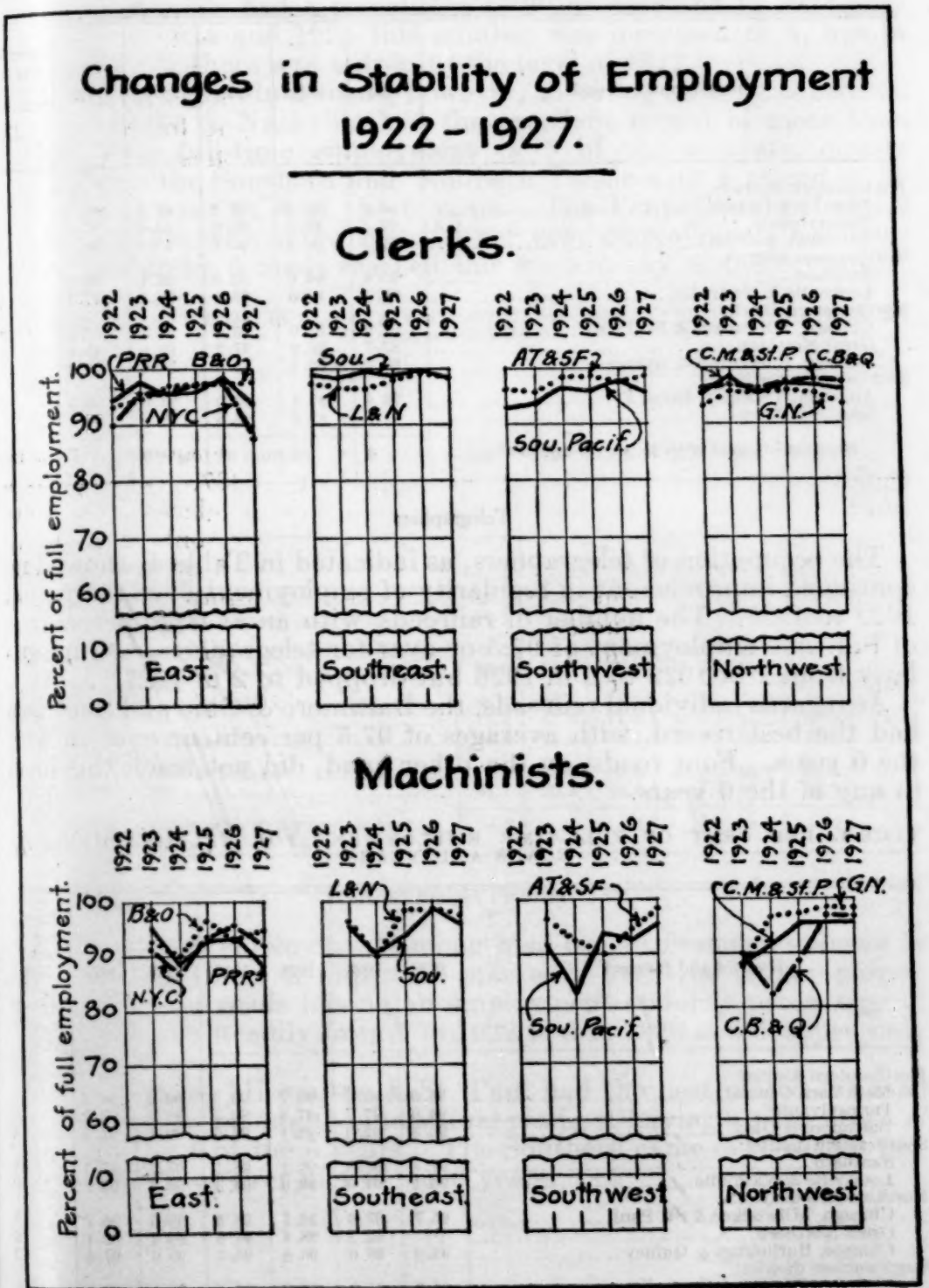
TABLE 2.—PER CENT OF FULL-TIME EMPLOYMENT FOR CLERKS, BY ROADS AND YEARS

District and railroad	1922	1923	1924	1925	1926	1927	Number of years with 97.5 per cent or over
Northeastern district:							
New York Central	90.0	95.8	95.6	97.1	97.5	87.3	1
Pennsylvania	94.9	97.9	95.6	95.9	98.7	93.8	2
Baltimore & Ohio	93.2	94.8	97.0	97.5	97.4	97.8	2
Southeastern district:							
Southern	98.8	98.5	99.2	98.9	99.5	98.1	6
Louisville & Nashville	97.5	96.7	96.4	97.9	99.3	98.5	4
Northwestern district:							
Chicago, Milwaukee & St. Paul	95.9	98.3	95.3	97.1	97.1	96.3	1
Great Northern	93.2	95.9	95.6	96.0	95.4	93.6	0
Chicago, Burlington & Quincy	96.1	97.0	96.0	97.6	98.0	97.5	3
Southwestern district:							
Atchison, Topeka & Santa Fe	96.3	95.7	98.2	98.4	97.4	98.7	3
Southern Pacific	92.8	93.7	96.6	96.0	97.7	95.8	1
Number of roads with 97.5 per cent or over	2	3	2	5	6	5	

Machinists

On the whole, there was a very marked improvement in the regularity of employment among machinists during the period 1923

CHART 2



to 1927. As shown in Table 3 and Chart 2 the number of roads having an employment stability of 95 or over dropped from 4 in 1923 to 1 in 1924, but thereafter steadily increased—to 4 in 1925, 6 in 1926, and 7 in 1927.

As regards individual roads, the Louisville & Nashville and the Great Northern had the best record, with employment percentages of 95 or over in 4 of the 5 years.

TABLE 3.—PER CENT OF FULL-TIME EMPLOYMENT FOR MACHINISTS, BY ROADS AND YEARS

District and railroad	1923	1924	1925	1926	1927	Number of years with 95 per cent or over
Northeastern district:						
New York Central	91.5	86.8	93.4	95.9	91.9	1
Pennsylvania	95.3	88.3	93.0	93.4	87.8	1
Baltimore & Ohio	92.7	90.1	96.8	92.8	94.2	1
Southeastern district:						
Southern	95.4	90.6	93.6	98.4	95.8	3
Louisville & Nashville	96.3	90.0	98.3	98.5	97.2	4
Northwestern district:						
Chicago, Milwaukee & St. Paul	87.9	91.6	95.4	95.5	95.6	3
Great Northern	87.7	96.9	97.2	98.5	98.4	4
Chicago, Burlington & Quincy	89.9	82.3	88.5	96.9	96.8	2
Southwestern district:						
Atchison, Topeka & Santa Fe	96.4	92.4	90.0	94.6	98.2	2
Southern Pacific	91.7	82.3	93.8	92.8	95.5	1
Number of roads with 95 per cent or over	4	1	4	6	7	

Telegraphers

The occupation of telegraphers, as indicated in Table 4, showed no continued improvement in regularity of employment over the period 1922 to 1927. The number of railroads with an average percentage of full-time employment of 97.5 or over for telegraphers rose irregularly from 1 in 1922 to 6 in 1926 but dropped to 2 in 1927.

As regards individual railroads, the Baltimore & Ohio and Southern had the best record, with averages of 97.5 per cent or over in 4 of the 6 years. Four roads, on the other hand, did not reach this level in any of the 6 years.

TABLE 4.—PER CENT OF FULL-TIME EMPLOYMENT FOR TELEGRAPHERS, BY ROADS AND YEARS

District and railroad	1922	1923	1924	1925	1926	1927	Number of years with 97.5 percent or over
Northeastern district:							
New York Central	94.0	98.9	95.7	96.5	99.2	98.3	3
Pennsylvania	94.0	97.7	97.8	96.3	98.9	93.2	3
Baltimore & Ohio	96.3	92.0	98.1	98.6	99.1	97.5	4
Southeastern district:							
Southern	97.7	93.3	99.1	98.1	97.7	97.3	4
Louisville & Nashville	96.1	94.0	90.9	94.3	95.3	95.7	0
Northwestern district:							
Chicago, Milwaukee & St. Paul	95.7	97.6	96.1	98.5	98.6	96.7	3
Great Northern	(1)	92.2	88.4	91.8	90.4	89.1	0
Chicago, Burlington & Quincy	95.0	98.0	96.8	95.3	99.0	97.4	2
Southwestern district:							
Atchison, Topeka & Santa Fe	94.7	95.0	95.8	96.5	95.4	97.3	0
Southern Pacific	91.4	94.2	91.2	94.3	95.1	94.6	0
Number of roads with 97.5 per cent or over	1	4	3	3	6	2	

[1] Original reports not clear.

Section Laborers

As shown in Table 5 and Chart 3, not only was there low stability of employment among section laborers in all the years covered but no important improvement took place between 1922 and 1927. In 1922 only 2 roads had a percentage of 90 or over and in 1923 only 1 road. In 1924 and 1925 this number was increased to 4, but in 1926 and 1927 there was a drop to the level of 1922.

As regards individual roads, however, there are striking contrasts. The Louisville & Nashville had the excellent record of more than 90 per cent full-time employment in 5 of the 6 years, closely followed by the Southern and Southern Pacific with a record of 90 per cent or over in 4 of the 6 years. The Pennsylvania shows 2 out of 6 years with more than 90 per cent employment, but none of the remaining 6 roads reached this level in any of the 6 years.

TABLE 5.—PER CENT OF FULL-TIME EMPLOYMENT FOR SECTION LABORERS, BY ROADS AND YEARS

District and railroad	1922	1923	1924	1925	1926	1927	Number of years with 90 per cent or over
Northeastern district:							
New York Central	77.2	85.0	80.7	83.3	82.9	83.4	0
Pennsylvania	88.3	85.2	90.0	94.5	88.3	84.7	2
Baltimore & Ohio	67.8	73.0	83.0	83.1	77.3	82.9	0
Southeastern district:							
Southern	89.0	88.1	91.4	93.5	93.9	91.3	4
Louisville & Nashville	94.5	88.3	90.5	95.3	95.4	92.6	5
Northwestern district:							
Chicago, Milwaukee & St. Paul	66.9	66.5	74.8	69.5	74.2	68.5	0
Great Northern	71.4	61.8	74.5	68.3	64.2	66.8	0
Chicago, Burlington & Quincy	64.6	68.8	71.1	75.8	75.2	77.6	0
Southwestern district:							
Atchison, Topeka & Santa Fe	86.0	83.8	80.3	84.6	84.1	82.3	0
Southern Pacific	91.7	90.4	92.0	90.7	89.4	87.5	4
Number of roads with 90 per cent or over	2	1	4	4	2	2	

Road Freight Firemen

Regularity of employment among road freight firemen as shown in Table 6 and Chart 3 improved markedly over the 6-year period. The number of roads having an employment stability percentage of 90 or over rose steadily from 1 to 1922 to 5 in 1926 and dropped only to 4 in 1927.

The Chicago, Milwaukee & St. Paul had the best record for road freight firemen among the individual roads, it having a percentage of 90 or over in 5 of the 6 years. The Southern came next with a percentage of 90 or over in 4 of the 6 years.

CHART 3

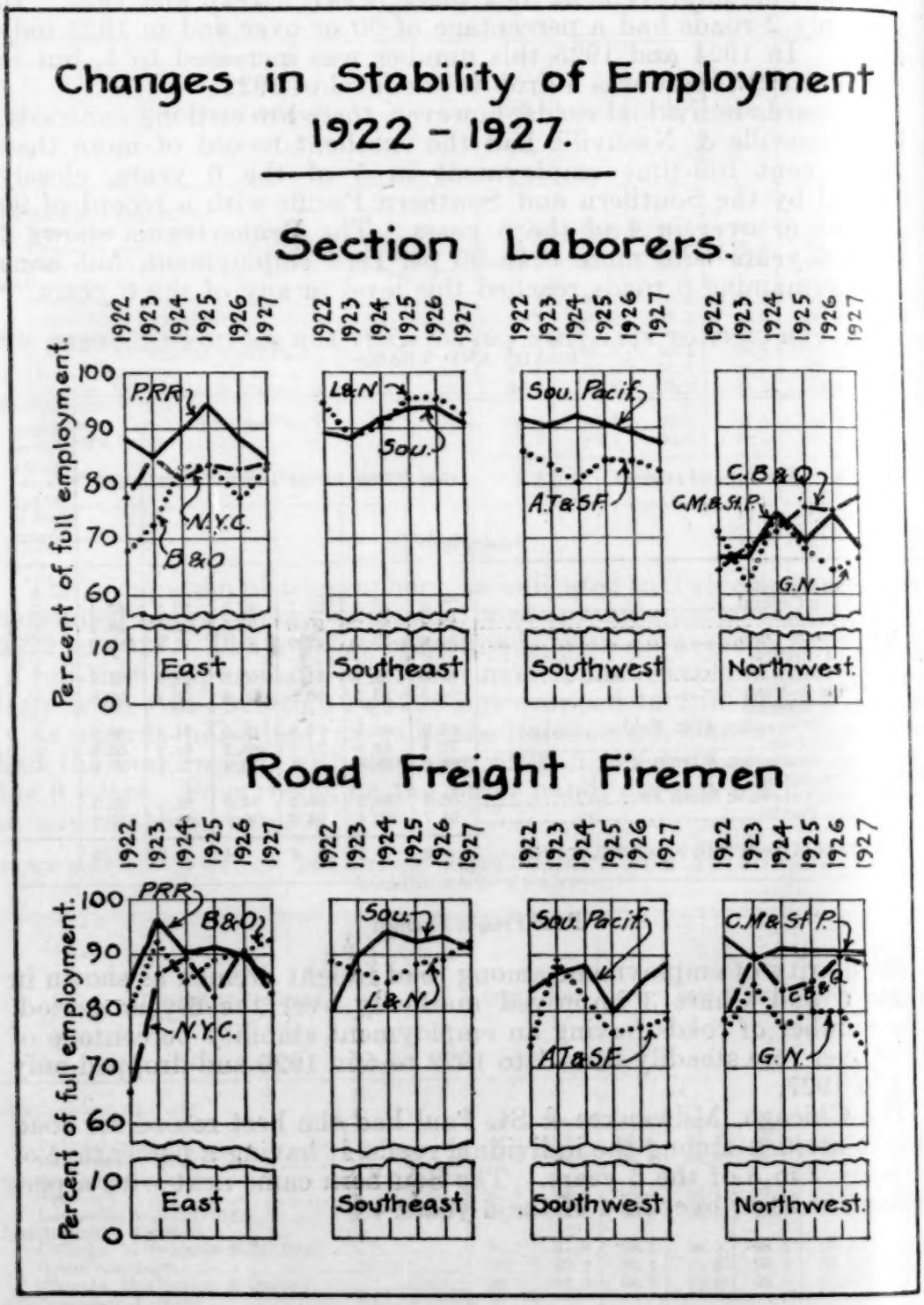

Changes in Stability of Employment
1922 - 1927.
Section Laborers.
Road Freight Firemen
Percent of full employment.
100
90
80
70
60
10
0
1922
1923
1924
1925
1926
1927
P.R.R.
N.Y.C.
B&O
L&N
Sou.
Sou. Pacif.
A.T.&S.F.
C.B.&Q.
C.M.&St.P.
G.N.
East
Southeast
Southwest
Northwest

TABLE 6.—PER CENT OF FULL-TIME EMPLOYMENT FOR ROAD FREIGHT FIREMEN, BY ROADS AND YEARS

District and railroad	1922	1923	1924	1925	1926	1927	Number of years with 90 per cent or over
Northeastern district:							
New York Central	65.8	86.7	89.5	82.7	91.2	83.3	1
Pennsylvania	84.2	96.2	90.1	91.5	89.9	85.7	3
Baltimore & Ohio	80.8	92.7	85.1	88.9	90.4	92.7	3
Southeastern district:							
Southern	79.8	89.9	94.1	92.3	93.2	91.1	4
Louisville & Nashville	89.2	87.5	85.0	88.5	89.3	92.5	1
Northwestern district:							
Chicago, Milwaukee & St. Paul	93.4	89.4	91.1	91.0	90.7	90.5	5
Great Northern	76.1	84.9	77.2	80.0	79.8	72.9	0
Chicago, Burlington & Quincy	78.6	89.8	83.8	85.4	90.1	88.5	1
Southwestern district:							
Atchison, Topeka & Santa Fe	73.5	89.5	82.4	76.5	77.0	78.8	0
Southern Pacific	83.5	86.9	87.9	80.1	85.2	88.3	0
Number of roads with 90 per cent or over	1	2	3	3	5	4	

Yard Brakemen

Among yard brakemen, regularity of employment showed no great improvement over the period reviewed, but on the whole conditions were somewhat better in the later years. Thus, as shown in Table 7, no roads had a full-time employment percentage of 92.5 or over for this occupation in 1922. In 1923 the number of roads in this class jumped to 6, declined to 3 and 1, respectively, in 1924 and 1925, and then rose to 6 and 5, respectively, in 1926 and 1927.

Comparing individual roads, the Pennsylvania and the Southern had the best records, with employment percentages of 92.5 or over in 4 of the 6 years.

TABLE 7.—PER CENT OF FULL-TIME EMPLOYMENT FOR YARD BRAKEMEN, BY ROADS AND YEARS

District and railroad	1922	1923	1924	1925	1926	1927	Number of years with 92.5 per cent or over
Northeastern district:							
New York Central	76.9	92.7	92.3	90.1	94.0	94.9	3
Pennsylvania	86.2	96.8	93.7	94.8	94.2	90.2	4
Baltimore & Ohio	81.2	94.1	87.4	91.5	93.8	94.9	3
Southeastern district:							
Southern	78.5	97.1	94.5	91.4	94.5	94.3	4
Louisville & Nashville	91.6	92.1	93.0	89.9	96.0	92.4	2
Northwestern district:							
Chicago, Milwaukee & St. Paul	85.4	93.9	90.3	92.3	93.4	96.3	3
Great Northern	80.6	91.1	81.5	82.5	79.1	77.9	0
Chicago, Burlington & Quincy	85.0	90.1	89.0	86.3	91.9	91.4	0
Southwestern district:							
Atchison, Topeka & Santa Fe	83.3	95.9	91.5	92.1	88.2	92.9	2
Southern Pacific	86.2	90.1	91.9	89.6	90.7	89.3	0
Number of roads with 92.5 per cent or over	0	6	3	1	6	5	

Cautions in Use of Data

IN considering the stability percentages set forth above, two cautions must be observed: First, the figures relate solely to regularity of employment within each year and not at all to the amount of employment. The gross amount of employment may increase in one year as compared with the preceding, but the regularity of employment may be less in the later year. Second, the method used in computing employment stability does not allow for what may be a normal and desirable increase in employment within the year. In the case of the railroads this possible error is of little importance, as the number of railroad employees during recent years has tended to remain rather stationary.

Labor Movement in China

By S. K. Sheldon Tso, M. A., Ph. D.

THE industrial revolution which started in England was the beginning of a world movement which transformed first Europe, then America, and is now pursuing its course through Asia. The most significant phase accompanying the movement is the question of labor; for the development of the factory system has produced a pronounced differentiation between capital and labor, the one not only supplying the raw material, but owning the buildings and machinery incident to the manufacturing process, and the other merely working for wages. Under these conditions the interests of the two tend to grow apart and to become at times irreconcilable, the evils of inequality seeming inherent with mass production.

Asiatic labor has seemed backward in sharing this most important world movement, yet since the armistice Chinese laboring classes have become articulate. The labor movement in China presents a new phase in the world history of the labor movement. The conventional interpretation, that of "class struggle," fails to include the real causes of this labor movement, and the broader term, "social readjustment," seems to be better fitted to describe the particular situation.

Attitude of Capital and Labor

CHINA is facing a crucial problem. Its importance lies in the fact that at present capital and labor are not yet separated by an impassable gulf. While the same long hours, low wages, bad housing conditions, and extreme poverty now prevail in China that existed in the West before the reform of the last century, on the other hand the Chinese employers are for the most part humane and amenable to reason, and the conditions have not become as impersonal as in the West.

The question is, Can Asia be saved from drifting into a state of settled warfare between employers and employees? The economic waste resulting from such industrial strife as that experienced by the western countries affords a lesson for the Orient. The fact has become plain that such loss must be borne by society as a whole, that

in the end humanity will suffer from the struggle, and that after all it is a meaningless struggle. In the United States both classes have been swinging from a fighting mood to a state of cooperation. This new unionism, as it may be called, marks a turning point in the history of the labor movement and seems to point the way to the road which Chinese labor should pursue, for, after all, industry is in its very nature cooperative.

China is in an adverse situation as regards the development of her industries, as the well-organized industries of western countries occupy an invincible position, while Japanese industries have become an increasingly important competitor at China's very door. Also China is handicapped by tariff restrictions and is impoverished by the payment of indemnities and interest on foreign loans, while her finances are under the control of the industrialized countries. Being at the crossroad, China's fate depends upon a policy of cooperation between capital and labor.

Character of Chinese Labor

THE Chinese laborer's notion of economic life is more deeply ingrained than that of any other people in the world; for instance, the institution of merchant and craft guilds has permeated Chinese economic activities for centuries and has produced a harmonious spirit between employer and employee. Ever since the introduction of the system its influence has been apparent, and it is only within recent years that its importance has declined in any degree. In order to get a full grasp of the subject, we must consider the nature of the Chinese workmen, the ancient system of wages, and the conception of Confucius as related to economic activities.

It is observed by Payne,[1] an American writer, that the Chinese are persistently sought by western capitalists because of their competence. In an article published by the United States Department of Commerce on the character of Chinese labor are the following words:

> His very keen sense of humor, with a quick appreciation of a joke, saves him endless trouble. These laborers are very quick to sense injustice and equally quick to appreciate a square deal. When misunderstood and not given fair treatment, they are limitless in stubborness, but are equally easy to get along with when their good nature, sense of square dealing, and humor are given consideration. Another strong asset of the Chinese is coolness and self-control in the face of irritating circumstances. He can disagree with you in a quieter and more polite way than any other nationality.[2]

From this observation, it seems evident that the Chinese do not possess a natural hostility toward employers unless the latter are unfair toward their employees. A class struggle would never be so disastrous as that which has occurred in western countries, due to the fact that the Chinese, being more or less guided by the thought and teachings of Confucius, deem obedience and docility as among the greatest virtues of human beings and the chief attributes of civilization.

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[1] Payne, E. G.: An Experiment in Alien Labor. Chicago, University of Chicago Press, 1912, p. 3.
[2] U. S. Department of Commerce. Bureau of Foreign and Domestic Commerce Trade Information Bul. No. 61: Industrial conditions in China. Washington, 1922, p. 1.

Ancient Wage System

THE exact beginning of the old wage system can not be found in history, but it existed long before 1321 B. C. It is known only that the hire system was employed in agriculture. It divides the wage earners into two classes—servants and laborers. The servants for the most part work at home; their labor is somewhat easy and their relation to the master and family is close and in its nature permanent. The laborers work anywhere; their labor is heavy and their relation to the master is loose and not at all permanent.

In the Record of Rites a general rule is given for dealings between employers and employees. It is that an employee wishing to obtain work should measure his ability and duty and examine all of the labor conditions before entering upon his employment. It means that the employee should make a careful bargain in the beginning and that afterward employer and employee should strive not against but for each other. This is a primitive type of rule as judged by modern standards, but it must be remembered that it was formulated 3,000 years ago.

The wage theory of Confucius, as stated in the Chinese classics, was that the amount of wages paid to the laborer should depend upon the product which he contributes. From this theory was later developed the so-called "ideal scale of wages." It purported to give to the wage earner of each class just compensation for his production. The common or lowest wage was based upon the product of the poor farmer which would be sufficient to support a family of 5 persons. It increased to a sum which would maintain 6, 7, and 9 persons. Thus the scale, composed of five grades, varied from the amount necessary to support 9 persons—the maximum—down to the sum that would sustain a family of 5—the minimum. With this well-established scale in the early period, the workers voiced no complaint or dissatisfaction. Another noteworthy fact in the ancient Chinese labor history is that Confucius seemed to favor education as a solution of the wage problem.

> Man is not determined by nature but by education * * * Since education determines the standing of men, it determines also their wages. * * * The difference between the most dissimilar characters, between a philosopher and a common street porter, for example, rises not so much from nature but from habit, customs, and education.

This principle served to satisfy those who received the lower wage in the scale.

China has no distinct social classes; at least they are far less sharply defined than in the western countries. According to Chinese tradition, only professional differences were seen. The reasons for their existence are given as follows: First comes the scholar, as civilization depends upon the intellect and without it men revert to barbarism. The farmer comes second in the social rank, for the mind can not function without food; in order to carry on the world's work men must eat, so the farmer is very highly respected. The artisan is placed third because he constructs houses and manufactures the implements for carrying on civilization. The merchant comes fourth for he is a middleman who produces nothing, but merely consumes the product others have produced, and at the same time attempts to share in the work of both the producer and the consumer.

It can readily be seen that artisans and farmers yielded first place to the scholar because of the latter's high attainment in knowledge. In other words, the laboring classes, in a modern sense, enjoy higher esteem than the merchants and traders, who are accorded the lowest place in the social world. Throughout Chinese history class exploitation in the European sense has never been resorted to in any degree, and, therefore, conflicts of the proletariat against the ruling class have been negligible. The only exception to this general rule is found in the conscription of labor for the building of public works, either locally or nationally, the Great Wall as well as the Grand Canal, two of the marvels of Chinese history, being built by conscription of labor.

Ancient Chinese State Socialism

THE extremely rare instances of the use of conscription or the "forced labor system" finally gave birth to a Chinese State socialism. In 1021 A. D. an economic program was adopted which embodied the theory that (1) the State should take over the entire management of commerce, industry, and agriculture; (2) tribunals should be established throughout the land to regulate the daily wage and the daily price of merchandise; (3) the soil should be measured and divided into equal areas, graded according to its fertility, in order that there might be a new basis for taxation; (4) taxes should be paid by the rich and the poor should be exempt from taxation; and (5) pensions should be provided for the aged and employment for the unemployed. This program was given a trial for 10 years, but it proved a failure on account of the bitterness of public opinion. Ever since that time harmony has seemed omnipresent and radical propaganda even to-day rarely commends itself to a patient hearing by the conservative Chinese. One or two exceptional cases are to be found in Canton, where the Kuomintang Party is composed of persons of different ideas, with a great majority of them avowed nationalists, but the few extremists are too weak in numbers to influence the policies of the party.

Efficiency of Chinese Labor

IN SPITE of the fact that the Chinese receive comparatively low wages, their efficiency has won the praise of many an employer. According to Julien Arnold, commercial attaché of the United States Legation in Peking:[3] "The Chinese laborer is remarkably good-natured, patient, industrious, able to subsist on comparatively little, possesses splendid endurance, and under proper training and supervision is the equal of the western laborer." Others have made the statement that the Chinese laborer, under competent foreign direction, is the equal of the best in the world, and that there is nothing that can be done with American labor that can not be duplicated with Chinese labor. In view of these favorable comments, we can readily see that with modern machinery and modern organization, the Chinese laborers will measure up to western standards after a reasonable amount of training.

[3] U. S. Department of Commerce. Bureau of Foreign and Domestic Commerce. Trade Information Bul. No. 75: Labor and industrial conditions in China. Washington, 1922, pp. 1, 2.

Foreign capitalists are attracted by this most desirable cheap supply of labor and the immense amount of raw materials with markets ready at hand, and it is estimated that more than one-half of the great industries are controlled by these foreign capitalists. They take advantage of all the privileges incident to extraterritoriality and other permissions and favors granted to foreign investors. Continuous exploitation, however, is gradually breaking down the oriental habits of docility and patience, and labor has been compelled to resort to unionism in order to defend itself against exploitation.

Unionization of Chinese Labor

CHINESE labor is becoming more and more independent, and is tending to regain freedom of expression and power of bargaining. Through experience it is realizing the superiority of modern unionism over the antiquated guild system as an instrument against exploitation. After a considerable number of successful struggles, the most notorious being the shipping strike at Hong Kong, unions began to grow rapidly. The Shanghai Labor Union is the largest and strongest in the country, representing over 200,000 workers.[4] In Canton unionism has developed more rapidly than in any other part of China, due, perhaps, to the influence of the Kuomintang Party. In 1926, it was estimated that there were 180 active unions and a combined membership of about 800,000 workers in this area.[5] In a general way the unionization of China is spreading to all important industrial and commercial centers and it is particularly strong in railway transportation, steam navigation, postal service, telephone and telegraph, and the textile industries.

The weapon of unionization is also employed against Chinese employers, many of whom follow the foreign employers in fixing wages, hours, and working conditions, claiming that in order to meet the competition of foreign employers it is necessary that they keep the same standards regardless of the interests of the workers. The demands of the workers in walkouts and strikes are justified and supported by public opinion, for the high cost of living since the introduction of the factory system into China not only has affected the workers themselves, but has worked havoc among the teeming millions of all classes.

Solution of the Problem

TAKING labor and capital as a whole, regardless of specific cases, it seems safe to say that labor and capital are not yet separated by an impassable gulf, for the teachings of Confucius are still followed, and as long as the Chinese peasant class can obtain a living wage, it will always be content to cooperate with the employers. The thing needed in the Chinese industrial and commercial world to-day is leadership and managerial ability. Industry in China may be likened to an orchestra; it can not be successfully conducted through a divided and inexperienced committee; someone with leadership and knowledge and skill must be found to be the sole director for the moment. The sooner a constructive force is found and applied to

[4] The North China Herald, Dec. 11, 1926, p. 400.
[5] China Weekly Review, March, 1926, pp. 6-8.

keep the two great opposing forces together, the safer will China's industry be and probably the more prosperous the nation. There is yet time to save China from wasteful warfare between employers and employees, and it becomes the duty of the employing class to take the initiative in the attempt to keep the traditional harmonious spirit from developing into a state of antagonism, as the workers are not sufficiently educated to distinguish between truth and falsehood, and in addition they are seriously handicapped in bargaining. In view of this situation, it appears to be the task of social science to find a solution for these problems of the Orient from the experiences of the Occident.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Office Working Conditions and Extra Compensation Plans

THE policies of a large number of companies in regard to working conditions, various insurance plans, vacations and other leaves of absence for their office employees are shown in a study[1] recently published by the American Management Association.

The information was secured from 304 establishments with a total of more than 174,000 employees, approximately three-fifths of whom were males. In comparing the results of the study, the offices were grouped in four groups according to the number of employees so that it was possible to compare the smaller with the larger offices. Group 1 consisted of 62 offices employing from 1 to 50 employees; group 2, 96 offices, with 51 to 200 employees; group 3, 68 offices, with 201 to 500 employees; and group 4, 78 offices, with more than 500 employees.

Hours of Work

THE average hours of work for all the offices were approximately 7 hours and 40 minutes. One hundred and sixteen offices had an 8-hour day, 25 worked more than 8 hours, and the working period of 163, or 53 per cent, ranged from 6 hours to 7¾ hours. The average working-day on Saturday was slightly over 4 hours, and only 51 of the offices reported that shorter hours were worked during the summer season. In general, the large offices have shorter working hours than the small offices. Several firms reported that the office was closed all day on Saturdays during the summer months in order to allow the employees better opportunities for outdoor recreation, as this policy had been found to result in improvement both in the health and morale of the employees.

Rest periods were granted by only 65 of the companies, a larger percentage of the large than of the small offices allowing stated periods, varying, generally, from 10 to 20 minutes, for rest. While the number of companies giving rest periods is comparatively small, a gradual movement toward giving them is said to be evident, as tests have shown that there is better output among typists, comptometer operators, and similar workers when they are given time for relaxation. In a few cases part of the rest period is taken for light physical exercises.

Vacations

VACATIONS with pay were granted by all of the offices, the usual vacation being two weeks. Two hundred and sixty-nine of the companies allow 12 working-days with pay, while 19 companies give

[1] American Management Association. Office executive series No. 30. Office working conditions and extra compensation plans, by H. J. Taylor. New York, 20 Vesey St., 1928.

less than 12 days and 16 more than 12. In addition to the regular vacations, 57 offices reported that an additional vacation was allowed for long service. The length of service required for eligibility for a vacation varied, but in the majority of cases a vacation is allowed after six months' service with the firm. The vacation is somewhat extended in a number of the smaller offices by allowing the employees to take the Saturday preceding their vacation period. Extra time is allowed by about 41 per cent of the companies when a legal holiday falls within the vacation period. This practice seems to be growing, for employees avoid taking their vacations in those weeks in which there is a legal holiday, making it hard to arrange vacation schedules, and if forced to take them then the employees are inclined to be dissatisfied.

Payment in case of absence because of sickness or accident is quite general, as only 5 companies do not pay during such absence; 17 companies sometimes do so, while 278 pay in all instances. Two hundred and thirty-nine of these companies pay full salary, 5 pay 75 per cent, 4 pay 66⅔ per cent, 7 pay 50 per cent, and 23 did not report on this point. Twenty-four offices, however, require employees to contribute to a fund from which these payments are made, while one company sometimes requires such a contribution.

Absence on account of a death in the family is paid for by 276 of the companies and more than half of the companies reporting provide compensation for religious holidays other than Christmas, while a large number pay for absence from work because of appointments with dentists or doctors.

Compensation and Promotion

SALARIES are paid every week by most of the smaller offices; twice a month is the usual pay time for the larger offices, and only a few pay but once a month.

Payment for overtime is not a general practice, only 59 of the 302 companies reporting on this point paying for extra time, 8 sometimes do so, and 36 pay supper money. There is a tendency in all offices, however, toward cutting down overtime by increasing efficiency and production during regular working hours.

Some form of recognition for long service is frequently found, in the form of additional vacation, salary increases, or bonuses. Of the firms reporting as to recognition for good attendance, more than half offer some incentive by taking regular attendance into consideration in connection with salary increases and promotions, by special bonus awards, etc.

The policy in regard to salary increases was reported by 286 offices. Twenty-one per cent reported that salary increases were given on the average every 6 months, 5 per cent even more frequently, 44 per cent every 12 months, and 28 per cent did not have any definite time for making promotions.

Welfare and Education

SPECIAL services contributing to the general welfare and advancement of employees were found more frequently in the large than in the small offices. These features include cooperative buying, loans,

stock-purchase plans, benefit associations, group life insurance, pensions, libraries, evening schools, employee publications, contributions to school tuition, musical training, pay-roll deduction insurance, and group savings plans. In addition to these features provisions are quite generally found for medical service of different kinds, recreation both indoor and outdoor, and social gatherings.

Resolutions Passed at Meeting of Association of Governmental Labor Officials

THE resolutions passed at the fifteenth annual convention of the Association of Governmental Labor Officials of the United States and Canada, held at New Orleans May 21 to 24, 1928, included three of particular interest. These related to the formulation of a building construction safety code; the classification of wage earners by sex in the 1929 census of manufactures and the grouping of woman wage earners in separate classifications according to their marital status; and the gathering, compiling, and publishing of data on the extent of employment of mothers of children under 14 years of age, and the number and age of such children, together with the employment status and occupations of the husbands of working women, in connection with the 1930 census of occupations. These three resolutions are printed in full below:

Building Construction Safety Code

Whereas this organization and the various States composing its membership are very much interested in the completion of a building construction safety code; and

Whereas the American Engineering Standards Committee has had this matter under consideration for several years without having so far accomplished anything definite: Therefore be it

Resolved by the Association of Governmental Labor Officials of the United States and Canada in convention at New Orleans, La., That we urge upon the American Engineering Standards Committee to especially stress the matter of this code and pursue such methods as will result in the early consideration of such code. We suggest:

First. If the present sponsor does not immediately act, that another sponsor be appointed who will act.

Second. If a general building construction safety code can not be secured under present conditions, then that the code be split up into separate codes and that we have, first, a code covering structural steel construction; second, a brick building code; third, a carpentry building code; fourth, a demolition code; and so on through the list of codes by piece-meal until such time as it is possible to bring them together under a general construction code.

[Moved that Mr. Stewart be empowered to represent the Association of Governmental Labor Officials on the American Engineering Standards Committee with full power to speak for the association.]

Sex Classification of Wage Earners

Whereas the reports of the Bureau of the Census are the recognized authority on statistics of national extent and importance in the United States, and

Whereas the census of occupations of 1920 shows that at that time women constituted one-fifth of all persons gainfully employed, that the gainfully employed women constituted one-fifth of all females 10 years of age and over, and that 1 in 11 of all women married and living with husbands were gainfully employed; and

Whereas from the fragmentary sources available there is reason to believe that women now form a greater proportion of all workers than in 1920, and that two-fifths of the working women are or have been married; and

Whereas the surroundings of the women of this generation are a large determinant in the healthy development of the next generation, and it is of the utmost importance to the fact that scientific studies be made of the effects of the conditions of their employment upon their family life and the welfare of their children; and

Whereas it is impossible to study, from the census of occupations, the occupational distribution of mothers or the extent to which they are employed, since the present classification includes widowed or divorced women with single women; and

Whereas the census of manufactures omitted in 1925 the classification of wage earners by sex, which had formerly been reported in every five-year period since 1900: Therefore be it

Resolved, That the Secretary of Commerce be requested to direct

First, that the following separate sex classifications be made in the census of manufactures of 1929: (1) Males and females 16 years of age and over; (2) Males and females under 16 years of age.

Second, that the following separate classifications be made in the census of occupations of 1930: (1) Married women living with husband; (2) women widowed, divorced, or otherwise separated; (3) single women; (4) women whose status is not reported.

Employment of Mothers

Whereas a total of nearly 2,000,000 married women, or 1 in 11 in the United States, were reported to be in gainful employment, and the number of these in manufacturing and mercantile industries increased 41 per cent during the decade from 1910 to 1920, while the number of all women so employed increased only 7 per cent; and

Whereas the development of a complex domestic and social problem is indicated by the fact that many of these women are mothers, who are forced to leave young children needing their care and to add to their household duties the work of supplementing the inadequate income of employed or unemployed husbands; and

Whereas in addition, many women not included in the foregoing figures are widowed, divorced, or separated from husbands and also must leave young children and assume the double responsibility of home making and of family support; and

Whereas the United States Bureau of the Census, though it collects information regarding the marital status and the composition of the families of bread-winning women, does not prepare tabulations which show the occupations of their husbands or the number and the ages of their children: Therefore be it

Resolved, That we, the members of this organization, call to the attention of our State legislatures and of organizations interested in these problems that the census of 1930 will offer an opportunity to secure the following types of information: First, the extent to which mothers of children under 14 are employed and the number and the ages of such children, and second, the employment status and the occupations of the husbands of occupied women; and be it

Resolved further, That we take every opportunity to urge that these facts be compiled and published.

First Regional Conference of Social Work of Pacific Coast States

IN THE Yosemite National Park, May 22–26, 1928, a regional conference was held for the first time by the California and Washington State Conferences of Social Work and the Oregon Association of Social Workers.

The keynote of the meeting was sounded in the address on "Social work and industry," by the Rev. Robert E. Lucey, D. D., president of the California Conference of Social Work and a member of the California State Department of Social Welfare. Doctor Lucey

emphasized the apparent disregard by the great majority of social workers of "pressing industrial problems." While social workers are bent on prevention rather than remedy and seek the causes of social maladjustment, "somehow or other this thing 'industrial relations' has been left out of the picture."

> We know that poverty of itself can not breed disease, physical or mental, nor can it alone cause delinquency or crime, but we are just as certain that poverty is a major contributing factor to all the social problems which we are trying to solve and poverty for the masses is the logical and direct outgrowth of our distorted industrial system. Our philosophy of private property is sound and the sins of industry must not shake our faith in American institutions, judicial, legislative, or executive, but loyalty and patriotism need not blind us to the dangerous weakness of our present economic order.
>
> And right here we find a partial failure, or shall we say neglect, on the part of social work. Economic dependency goes hand in hand with physical and mental disease, ignorance, crime, and juvenile delinquency, and these combine to produce unspeakable human misery and premature death. Obviously if industrial conditions are causing economic dependency social workers should be among the first to study those factors of industry which produce dependency.
>
> Perhaps we should mention here that we do not lay all economic dependence at the door of industry. Some men are lazy, improvident, feeble-minded, or inefficient; some physically handicapped or too old to labor. Industry is not accountable for their dependency.

According to the speaker, religion and social work not only recognize that there should be "a fair distribution of wealth and income among normal human beings who are honest and industrious" but "acknowledge and defend the right of human beings to develop their personality, maintain their self-respect, enjoy security of mind and body, and by the exercise of their intelligence, initiative, and creative capacity attain the highest degree of happiness possible to man in this world. In a word, we demand for all men the right to life, liberty, and the pursuit of happiness."

After putting the questions "Are national wealth and national income fairly distributed in our country, and do we in fact recognize the value and dignity of human personality," Doctor Lucey declared that according to the findings of an investigation of the Federal Trade Commission 1 per cent of our people own 59 per cent of our wealth, and 13 per cent of our people own 90 per cent of the wealth.[1] He also pointed out that more than 90 per cent of the families covered in the 1918–19 cost-of-living investigation, of the United States Bureau of Labor Statistics, which included over 12,000 families, had incomes under $2,100 per annum. Only 2.9 per cent had an income of $2,500 or over.

Referring to the immaterial gifts of man, Doctor Lucey said: "Industry has known the muscle, brawn, and sweat of man, but has failed to recognize his finer human attributes," too often using him as a machine or tool, to be scrapped when worn out.

The social worker holds that "to block man's progress to higher and nobler things is a crime against God and humanity." The new conscious aim of labor also "puts human personality in the foreground and regards wages and material advantages as mere means to an end."

Doctor Lucey holds that unless the worker has security against unemployment, a reasonable share in the management of his work,

[1] U. S. Federal Trade Commission. National Wealth and Income. Washington, 1926, p. 3. (Statement based on probate records, 1912–1923.)

and freedom in ordering his life he "is subjected to economic slavery and fair wages are no excuse for servitude." The worker's right to these three conditions of labor is undeniable, provided he is earnest and capable, the president of the California Conference of Social Work contends.

> Some will say that higher wages and larger freedom are not helpful to the workingman, for he will squander his wages and waste his leisure time. If this be true, it is a profound indictment of the church, the home, the school, and social work. But we can not believe that it is true, and even if it were, we could not ethically hold those who toil in servitude because they would not use their freedom as we would wish. The least we could do would be to teach them and set them free.

The new liberty for the workers will mean, Doctor Lucey claims, the setting free of a tremendous creative energy pent up in the soul of labor.

Among the advantages derived from labor's sharing in management are, he thinks, the bringing together of employer and worker in friendly conference, their better acquaintance, and the consequent reduction of antagonism and the increase of cooperation on both sides.

In discussing the part to be played by the social worker in the industrial drama, attention was called by the speaker to the fortunate situation of such worker—about half way between labor and capital, the clients of social agencies being so often the wage earners and their families, while the supporters and friends of social agencies are business men and representatives of industry.

> Should not social workers study the problems of industry and then carry to both classes the message of mutual cooperation, tolerance, and forbearance? We can not go on as we are, a few are growing very wealthy and the masses are very poor. Tens of thousands are coming to us every year, victims of economic slavery, unjust wages, unsanitary factories, overwork, mental breakdown, unemployment, strikes, and lockouts. Shall we continue to lift them up when they have fallen down, or shall we try to prevent their failure by giving them a chance to really live?
>
> Labor is looking toward the dawn of a new day when the worker shall be seen as a man, a creature of unmeasured dignity and Divine destiny, one who must toil to live, but one who thinks and feels and understands. May social work hasten that day.

Among the numerous other addresses on the program were the following: "Why a shorter working-day?," by Paul Scharrenberg, secretary-treasurer of the California Federation of Labor, San Francisco; "What does the community owe to workers in industry?," by Minnette B. Brodke, supervisor of industrial recreation, department of playground and recreation, Los Angeles; "Attitudes and trends in recreation for workers," by E. B. deGroot, chief scout executive, Los Angeles District Council; "Social reform and the labor movement," by Sidney Hillman, president of the Amalgamated Clothing Workers of America, New York City; and "The inevitability of social insurance," by Chester H. Rowell, Berkeley. Furthermore, one of the section meetings was devoted to the discussion of wages and cost of living, and another to unemployment. Included in the general subjects on the agenda were Mexican immigration and mental hygiene and industry.

Establishment of Mine Labor Police in Bolivia [1]

ON PETITION of the Oruro Labor Congress, an executive decree was issued on February 2, 1928, establishing in all mining centers of Bolivia mining police to function in cooperation with the National Labor Bureau. They are to be paid by a voluntary deduction of 1 per cent from the miners' wages. Their duty will be to act as representatives of the miners, in which capacity they may take part in negotiations for labor contracts and the fixing of wages, operate company stores, investigate industrial accidents and suggest measures for their prevention, prepare statistics, and perform other similar duties. They are expected to use their influence to maintain order among the miners, and are strictly forbidden to carry on propaganda against the companies.

The Minister of Industry is charged with the administration of the law.

[1] Report from the American vice consul, G. H. Butler, at La Paz, Bolivia, dated Apr. 13, 1928.

PRODUCTIVITY OF INDUSTRY AND LABOR

Increased Productivity in Automobile Foundry Work

BY UTILIZING the available space between the floor and the roof of their foundry building, and without additions to the building, the Nash Motors Co., Kenosha, Wis., "has increased production by 50 per cent and has halved direct labor cost," according to an article describing the plant layout, published in the Iron Age (New York) for May 31, 1928. In addition, under the new arrangement sufficient floor space was saved to enable the company to duplicate the new units and double output should it seem desirable.

It is stated that formerly core-making facilities were inadequate because of limited floor space, and this prevented the full utilization of truck conveyors and sand slingers which had been installed for the production of cylinder, cylinder head, and transmission case castings. To remedy the situation, three continuous core ovens were installed—two of the vertical type and one arranged overhead—so that molders may now use the space formerly occupied by the old core ovens. One of the ovens is used for baking small cores, another for large core work, and the third for drying cores which have been pasted.

The article comments as follows on the results of the improved methods:

> An analysis of the value of this equipment is shown by the fact that core-making methods formerly employed in this foundry limited output to the equivalent of about 350 cars per 16-hour day. The new layout steps this up to 500 cars and, if duplicate units are installed, for which there is ample room, the output of this foundry, expressed in cars per 16 hours, will be close to the 1,000 mark.

Flywheels furnish another example in this plant of increased productivity, accompanied by a reduction in cost per unit, through the use of modern equipment.

> With former practice 400 flywheels were made in a 10-hour day on a floor space of 2,700 square feet, which does not include the area required for tumbler equipment, located in another part of the building. Molding, pouring, and cleaning operations on 1,200 flywheels are now performed in a 10-hour day on a floor area of 3,915 square feet. This figures 6.75 square feet per flywheel by the old method and 3.26 square feet required by the new method. Cost per flywheel by the new method is only 48 per cent of the cost of producing by the old method.

Increased Production Resulting from Lessening of Noise

A NOTE in Industrial Psychology (Hamilton, N. Y.) for July, 1928, is of interest in connection with the increasing attention which is being given to the injurious effects of noise on the health of workers and on production. The note states that 60 imperfections were found in the assembling of 80 temperature regulators by a group of experienced workers in a German factory. The poor quality of the work was ascribed by a German industrial psychologist to the fact that the assembly room was adjacent to a boiler shop which produced a great deal of noise. When the work of

assembling was transferred to a quieter place production immediately rose to 110 in the same period of time, with only 7 imperfections in contrast with the 60 found in the assembling of the 80 regulators under the noisy conditions.

The poor production in a packing room was ascribed by the same authority to the noise from a fan. When the fan was stopped, as an experiment, production is reported to have immediately risen 12 per cent in spite of poorer ventilation during the period of the experiment.

Waste Elimination in a Shipbuilding Plant, Through Adoption of Suggestions from Employees

IN A campaign for the elimination or prevention of avoidable waste, the Newport News Shipbuilding & Dry Dock Co. requested its employees to focus their attention on the various conditions and plant practices which contributed to the company's annual waste bill, and to make suggestions. Details of the campaign are given in an article by William B. Ferguson and A. A. Giese in Manufacturing Industries (New York) for June, 1928, from which the following information is taken.

A total of 2,770 suggestions were received, nearly all of which are said to have had value or merit, although there was some duplication and many were not sufficiently specific or definite for actual use. However, of the total number received, 1,482 contained concrete ideas and 677 of them have been approved and a large number adopted. Of the approved suggestions, 192 related to machinery, equipment, tools, and buildings; 109 to material; 96 to labor; and 134 to products; the remaining 146 being of a miscellaneous character.

The supervisors averaged more suggestions per individual than the workers, 302 having submitted 1,213 suggestions as compared with the 1,557 suggestions submitted by 639 workers. Of the 107 suggestions which are expected to result in major savings, the 67 submitted by supervisors are credited with an estimated annual saving of $117,100 and the 40 submitted by the workers a saving of $100,900. The total amount of annual savings from all suggestions is estimated at $264,410. The following table, taken from the article, shows the estimated annual savings from all classes of suggestions, those received from the supervisors and the workers being listed separately:

ESTIMATED ANNUAL SAVINGS RESULTING FROM APPROVED SUGGESTIONS

Classification of suggestions according to anticipated savings	Supervisors		Workers		Total	
	Number of approved suggestions	Estimated annual saving	Number of approved suggestions	Estimated annual saving	Number of approved suggestions	Estimated annual saving
Major savings:						
Extraordinary and novel ideas	11	$72,000	10	$80,000	21	$152,000
Unusually good ideas	32	37,000	14	16,000	46	53,000
Very good ideas	24	8,100	16	4,900	40	13,000
Total	67	117,100	40	100,900	107	218,000
Medium savings	184	23,000	139	17,375	323	40,375
Small savings	89	2,670	103	3,090	192	5,760
Very small savings	29	145	26	130	55	275
Grand total	369	142,915	308	121,495	677	264,410

Seventy-three cash prizes have been awarded by the company for articles, slogans, best display boards, and suggestions. In order to follow up and carry out all of the 677 approved suggestions and others which are being received, a permanent organization has been built up, the campaign organization being used as a base. This organization is composed mostly of men in the service or staff departments. The working committees of the organization meet once a week. The company plans to award prizes twice a year for valuable suggestions.

In addition to the financial gains to be derived from the waste-elimination campaign, the writers make the following statement:

> There has come about a better understanding and relationship, a better acquaintance, between men and management—workers, supervisors, executives—and the strengthening of the spirit and will-to-win all along the line. The stimulus given to "creative thinking" by such a campaign may be worth more in the long run than the suggestions themselves, as valuable as these may be, for it gives every man the stimulus always felt by a more personal interest and a closer touch with his work.

In a special talk at a mass meeting of workers on the first day of the campaign, Mr. E. E. Hunt, assistant to the Secretary of the United States Department of Commerce, said: "If you eliminate waste you reduce costs; if you reduce costs you can make the lowest bid on new business; if you get the business you increase employment."

Cost of Production of Pig Iron in China

A SERIES of studies of industrial and financial problems in China, published by the Chinese Government Bureau of Economic Information,[1] includes an article entitled "The Iron and Steel Industry in China; Its Cost of Production," from which the following extracts are taken.

The study is limited to important modern iron and steel works, including those of the Hanyehping Co., with one plant at Hanyang, "undoubtedly the greatest," and two new blast furnaces at Tayeh; the blast furnace of the Yangtze Engineering Works; a 250-ton blast furnace operated by the Lung Yen Iron Works; and two other plants, one with three blast furnaces and the other with two, which are operated with joint Chinese and Japanese capital.

Items of Cost of Pig Iron

CONSIDERING manufacturing cost of pig iron at "Works A" the author says:

> The cost of pig iron is made up of five items, each of which is again subdivided. The five items are (1) raw materials, (2) direct wages, (3) manufacturing expenses, (4) general expenses, and (5) financial expenses. Under the first heading are grouped all kinds of raw materials—iron ore, manganese ore, limestone, coke, and many other varieties of iron sometimes used in place of iron ore, such as scrap iron, native white iron, reheating furnace slag, and mill scale. The first four kinds of materials form the chief constituents of pig iron, because, in addition to iron and manganese, pig iron contains silica, which is obtained from limestone, and carbon, which is obtained from coke. It also contains a certain percentage of sulphur and phosphorus, both of which come from the ore itself.

[1] China. Bureau of Economic Information. China's Industries and Finance, by D. K. Lieu. Peking. (No date.)

The most expensive single item among raw materials, which is also the most expensive of all items of cost, is coke, the figures varying from 45.7 to 55.4 per cent of the total cost of pig iron. And yet the coke is of the best grade, only about 120 tons of it being necessary for the production of 100 tons of pig iron. The coke is produced at the company's own colliery, from coal of such a quality that it takes only about one ton of coal to produce one ton of coke. * * *

The next largest item of cost in raw materials is iron ore and other substances containing iron. Of these, mill scale, furnace slag, and scrap iron need hardly be considered, as they are only used to a very limited extent, and would be sold at a loss on the market if not consumed in the blast furnace or the melting shop. The native white iron used at this works is very costly, ranging from 2 to 13.5 per cent of the total cost. However, as the use of this kind of raw material is unnecessary, and as it was used simply because the works had it in store—being bought years ago at farcical prices—it should not be seriously considered as an important item of cost.

The iron ore, the author states, comes from the company's own mines. Its production cost less than $2.80 per ton, but transportation from the mines to the works cost 85 cents per ton, which, with other expenses, brought the cost up to about $4 per ton at the furnaces. This cost is now lowered considerably by smelting the ore in the new blast furnaces at the mines, but the coke has to be transported a longer distance from the colliery to the new furnaces, thus increasing that cost. "As nearly equal quantities of coke and ore are used in the furnaces, the saving effected in transportation is not of much significance." The limestone also comes mainly from the company's mines, and the cost per ton at the furnaces varies between $2.32 and $3.81, including all transportation and overhead charges. Manganese comes from the company's mines at other localities. These two items amounted to 3 or 4 per cent of the total cost.

Cost of Labor

THE next group of cost items, the direct labor cost, includes not only the wages of laborers working at the furnaces but also of those working at the blowing and pumping plants, both of which are essential adjuncts to the furnaces. The wages of the laborer vary according to the grade of labor performed. In general the laborers are divided into four grades: Foremen, mechanics, regular laborers, and helpers paid by the day. Foremen are paid in some cases as high as $100 a month; mechanics receive about $20; the regular laborers from 8,500 to 9,000 cash (about $7); and the helpers only 200 cash a day (about 15 cents). In some cases contract labor is also employed.

The laborers work in two shifts, a day shift and a night shift. At the small furnaces, the shift consists of about 2 foremen, 3 mechanics, and 50 laborers. At the large furnace there are about twice as many laborers.

As the wages are very low, the total cost in direct labor for all three furnaces totals only from 0.8 to 1.4 per cent of the total cost of iron production. The advantage of cheap labor is phenomenal, and if the iron industry does not prosper, and if the cost of iron does not stay below that in other countries, the blame can not be laid on labor. It can not even be said that the latter is cheap but inefficient, because inefficient labor would combine a low rate per man with a high per cent cost per unit of product, which condition does not obtain in the present case.

Manufacturing Expense

THE next group of cost items is manufacturing expense. This includes power, light, water, supplies, replacement of tools, repairs and maintenance, new minor works, transportation in the works,

laboratory expenses, depreciation, and royalty. Steam power is supplied by boilers of the same department. Electric power, which is also used in the smelting plant, as well as light and water, is supplied by the mechanical department of the same works. Heat, an ordinary factor of cost, is unnecessary for those working at the furnaces, and for the office rooms and repair shops it is charged to "general expenses" or "repairs and maintenance."

Provision for depreciation is always a difficult question, as different plans have different advantages. But where a plant has been working for many years without a proper system of accounting—as in the case here, where even the original cost of constructing the plant is more or less forgotten—it becomes ten times harder to provide for depreciation. To make the best of the situation, a blanket charge of 5 per cent on the value of the plant is written off every year as depreciation, and physical valuation serves as the basis of calculation. The whole works has been valued more than once, but the most detailed estimates were made in 1909 by two foreign engineers engaged by the company. The provision for depreciation is based on that figure.

As regards the item of royalty, "many years ago, it was agreed between the Government and the works that the latter should pay as royalty one tael for every ton of pig iron produced. This item of cost, therefore, varies directly in proportion to the quantity of production. The percentage of all manufacturing expenses combined ranged between 5.9 and 13.2. This, too, is very low compared with corresponding items for iron production in foreign countries."

Raw Materials Ninety Times the Cost of Direct Labor

TAKING all cost items into consideration, the author found that direct wages constituted the smallest percentage, and raw materials the largest, the ratio between the two being 1 to 90 (for March).

Such conditions can not be found elsewhere. The percentages for manufacturing and general expenses are not unusual, although they are lower than like percentages in other countries. The charge for interest is rather high, but this is due to the special conditions under which the plant is being worked.

The following table was compiled from the cost data of the blast furnace department:

TABLE 1.—PROPORTIONATE COST OF VARIOUS ITEMS IN PRODUCTION OF PIG IRON

Month	Per cent of total		Cost of production absorbed by—		
	Materials	Labor	Manufacturing expenses	General expenses	Financial expenses
January	76.9	1.2	11.4	4.0	6.0
February	72.7	1.4	12.0	6.1	7.7
March	73.6	0.8	13.2	6.2	6.2
April	75.6	1.2	12.3	5.2	5.7
May	77.6	1.1	12.3	4.2	4.8
June	78.5	1.0	11.8	3.9	4.8
July	79.8	1.0	10.5	4.3	4.6
Average for 7 months	76.4	1.1	12.0	4.8	5.7

Comparison of Large and Small Furnaces

OF THE three furnaces in operation, Nos. 1 and 2 were small and of an old type. Their receptive capacity was 248 cubic meters each, their productive capacity from 90 to 100 tons of pig iron per day. Furnace No. 3 was twice the size of Nos. 1 or 2, with a capacity of 477 cubic meters and a production of 230 to 250 tons of pig iron per day. These "new" furnaces (Nos. 3 and 4) are less expensive to operate, as is shown by Table 2:

TABLE 2.—COMPARATIVE PRODUCTION COSTS OF LARGE AND SMALL FURNACES

Month	Cost per ton at furnace No. 3 compared with that at—		
	Furnace No. 1	Furnace No. 2	Average cost of all 3 furnances
January	$6.38 less	$5.15 less	$2.54 less
February	4.07 less	3.17 less	1.68 less
March	9.99 less	9.82 less	4.49 less
April	3.14 less	3.34 less	1.49 less
May	2.37 less	2.12 less	.99 less
June	4.14 less	4.04 less	1.71 less
July	3.83 less	11.67 less	2.73 less
Average for 7 months	4.86 less	5.62 less	2.22 less

"Works B" is treated in less detail but the following is presented showing the percentage each item of cost forms of the total cost of production of 1 ton of pig iron:

	Per cent of total cost
Ore	25.5
Coke	28.7
Limestone	1.3
Total, raw materials	55.5
Labor	6.5
Miscellaneous (including repairs)	10.9
Depreciation	8.1
Total, manufacturing expenses	19.0
Officers (corresponding to "general expenses" in works A)	2.2
Interest on fixed capital	9.6
Interest on current capital tied up in unsold product	5.3
Replacement reserve	1.9
Total, "financial" espenses	16.8

Table 3 following combines the data for both works for purposes of comparison, showing both the percentage of cost and the money expenses in each cost item, based on the cost of 1 ton of pig iron at the works:

TABLE 3.—COMPARISON OF PRODUCTION COSTS AT PLANTS A AND B

Cost item	Plant A		Plant B	
	Per cent of total cost	Amount	Per cent of total cost	Amount
Coke	50.6	$24.54	28.7	$5.74
Ore	13.5	6.55	25.5	5.10
Raw materials (including coke and ore)	76.4	37.05	55.5	11.10
Direct labor	1.1	0.53	6.5	1.30
Manufacturing expenses	12.0	5.82	19.0	3.80
General expenses	4.8	2.33	2.2	0.44
Financial expenses	5.7	2.77	16.8	3.36
Total cost of production	100	48.50	100	20.00

Analyzing the table the writer points out that—

The high cost at A is due mainly to the high cost of raw materials, especially coke. This item alone amounts to as much as 50.6 per cent of the total cost, almost the same percentage as all raw materials combined at B. And 50.6 per cent of $48.50 means $24.54, which is more than the total cost of iron at the latter place. On the other hand, iron ore at A constitutes only about 13 per cent of the total cost, while that at B is 25 per cent. Taking into consideration the difference in total cost at the two places, we find that it does not cost any more to A than to B. Direct labor is cheaper at A and "financial" expenses are lower. Manufacturing and general expenses are relatively higher.

The great difference therefore lies in the one item, coke. Works A coke costs much more than that of Works B, not because it is produced from inferior coal, but because the cost of mining coal, of transforming it into coke, and of transporting the coke to the works is very high. As has been mentioned before, the coke used at A comes from its own colliery. At the colliery, 147 tons of coal produce 100 tons of coke, while at B, 166 tons are necessary. This means that A's coal is superior to B's. Yet one ton of coke at B costs about $7, while at A it costs more than $11. At B the coke is used where it is produced, because the iron works is located at the coal mines, while iron ore, which is produced at a nearby place, is transported to B for smelting. In the case of Works A, both ore and coke come from other localities, and the transportation charges for coke were as high as $6 per ton. One ton of coke, on arrival at A, costs $17, or $10 more than it does at B.

Thus far we have not taken into consideration the difference in the quality of the pig iron produced. According to analyses made for the two works by experienced metallurgists, the product of works A contains about 94 per cent pure iron and about 4 per cent carbon, and that of B about 93 per cent of pure iron. The difference, therefore, is not very great. By such comparisons we do not mean to show A in an unfavorable light. We mean only to point out the great handicap to industries on account of inadequate transportation facilities. Works A has its own boats to carry coke and ore, yet the cost is so very high. If cheap railway transportation be substituted for the boats, the cost might be greatly reduced. Thus, in estimating the cost of iron production in China, such unfavorable factors must be taken into account. Works B iron involved much lower production cost, but when transported to the markets, it was also sold at more than $40 per ton. Under such conditions, it is certainly very hard to develop basic industries which produce bulky commodities made from equally bulky raw materials. Unless transportation is facilitated, China can not expect to compete with other nations in such industries.

INDUSTRIAL ACCIDENTS AND DISEASES

Coke-Oven Accidents in the United States in 1926

THE annual report of the Bureau of Mines on coke-oven accidents in the United States during the calendar year 1926 (Technical Paper No. 437) has just been received. Due to an explosion at a by-product plant in Indiana the accident rates show a slight increase over those for 1925. Thus 51 deaths and 1,922 lost-time injuries, including 2 permanent total disabilities, 46 permanent partial disabilities, and 472 cases of temporary disability lasting more than 14 days, marked the record for 1926, giving an accident rate per thousand men employed (based on 23,115 men employed at all plants and a volume of labor equal to 7,286,605 man-shifts) of 2.1 for fatal cases and of 79 for nonfatal injuries. In 1925 the corresponding rates were 1.16 and 71, respectively. Excluding the explosion referred to, the death rate was 1.48 and the injury rate was 77. For the five-year period ending with 1925 the fatality rate was 1.4 and the nonfatal rate was 93.

In the absence of definite figures the report estimates that a total of 378,316 days were lost because of these accidents in 1926; this number includes, however, 8,412 days lost by 1,402 temporary cases in which the time lost did not exceed 14 days. Accident severity rates have not been computed, but a table is included showing, for by-product and beehive ovens separately, the relative percentage that each specified severity group (fatal, permanent total, etc.), classified by cause, bears to the total. For beehive ovens the fatality cases represent 1.11 per cent, the permanent injuries 2.38 per cent, and the temporary injuries 96.51 per cent of the total cases; and for by-product ovens the percentages are, respectively, 2.13, 2.53, and 95.34.

The tables in the report are based on information from 69 companies operating 9,913 by-product ovens and 115 companies operating 23,436 beehive ovens, and are presented in detail classified by type of oven, by cause, by State, and by years back to 1916 in some instances and to 1921 in others. The following table summarizes this information:

NUMBER AND CLASSIFICATION OF INJURIES AT COKE OVENS IN THE UNITED STATES, 1916 TO 1926

Character of injury	Total, 1916–1920		Total, 1921–1925		1921	1922	1923	1924	1925	1926
	Number	Per cent	Number	Per cent						
Fatal	296	1.08	143	1.48	17	29	45	24	28	51
Serious (time lost more than 14 days):										
Permanent disability—										
Total [1]	11	.04	6	.06	-------	1	5	-------	-------	2
Partial [2]	423	1.54	212	2.20	24	35	71	38	44	46
Others	3,902	14.20	2,167	22.48	318	387	625	431	406	472
Slight (time lost, 1 to 14 days, inclusive)	22,852	83.14	7,112	73.78	1,511	1,287	1,892	1,176	1,246	1,402
Total injuries	27,188	98.92	9,497	98.52	1,853	1,710	2,593	1,645	1,696	1,922
Total fatalities and injuries	27,484	100.00	9,640	100.00	1,870	1,739	2,638	1,669	1,724	1,973
Men employed, average per year	30,658	-------	20,583	-------	16,204	19,278	23,729	20,451	23,254	23,115

[1] Permanent total disability: Loss of both legs or arms, one leg and one arm, total loss of eyesight, paralysis or other condition permanently incapacitating workman from doing any work of a gainful occupation.
[2] Permanent partial disability: Loss of one foot, leg, hand, eye, one or more fingers, one or more toes, any dislocation where ligaments are severed, or any other injury known in surgery to be permanent partial disability.

A comparison of the records of large and small plants is made, showing the former in a much more favorable light, especially as affecting the by-product ovens. Thus we find that in 1926 by-product ovens with from 1 to 24 workers had a nonfatal rate per thousand 300-day workers of 189; those with from 25 to 49 employees had a rate of 294, while ovens employing 300 or more workers had a rate of only 43. In beehive ovens the rates were, respectively, 116, 114, and 117, the latter figure, however, covering plants with 100 men or more.

Increased Accident Hazards caused by Mechanization of Coal Mines

THE United States Bureau of Mines has recently concluded a study tending to show, by numerous examples, that accident hazards in coal mines have been measurably increased where the newer or concentrated mechanical mining systems are used. The results of the study are published in Information Circular No. 6070. Since it appears that less than 3 per cent of the coal mines in the country are using the newer mechanical methods and that less than 25 per cent of these are producing full tonnage from the newer systems, the Bureau of Mines believes the time is opportune to point out some of the pitfalls to safety that are likely to be encountered, with the idea of helping to prevent accidents or disasters, without any intent to prevent the spread of mechanization of mines or concentration of mine workers or mine workings.

While there are plenty of good and sufficient reasons why the newer or concentrated systems using mechanical rather than man power can, will, and should be used in our mines, there is absolutely no justification for attempting to utilize these newer ideas without the taking of common-sense precautions looking to the safety of the mine and of the miners as well as to lower costs and to increased tonnage.

The report discloses the fact that in a number of mines the concentrated systems have had to be abandoned chiefly on account of the safety element and notes instances where States have specifically barred certain methods in use under mechanical systems.

One of the most alarming features about the newer systems of mining is said to be the laxity in connection with ventilation, and one of the "worst forms" of ventilation makeshifts is the use of blower fans and tubing in supposedly ventilating coal mine faces. Mention is made of one of many disasters due to the use of these fans, where four men were killed in consequence of methane ignition where an entry-driving machine working face was forced to rely upon a blower fan and tubing for ventilation.

Carelessness in the use of electricity in connection with scrapers, conveyors, loaders, fans, etc., is given as another hazard which is likely to become more frequent as mechanization proceeds.

The report suggests that probably the most dangerous feature concerning safety when these concentrated systems are used arises from the fact that it frequently, if not generally, is considered necessary to complete a full cycle of operations daily if the methods are to be successful, "and to complete this cycle of operations each day mining men appear to be willing to cast aside one precautionary practice after another long determined as necessary to keep mines safe." Practices are used in the mechanized section of a mine, it is stated, which would not be countenanced in the other parts of the same mine which are using older systems of working. Numerous examples of this are given in the report, and on these examples are based the recommendations that follow, covering about four pages of the report. They may be briefly summarized here:

1. Ample, competent supervision; at least one supervising official for about each 25 underground workers.

2. Those in charge of concentrated systems should be in full sympathy with the system, at least to the extent of giving it a fair trial.

3. Carefully planned ventilation; single entries never longer than 200 feet. Place no reliance upon any form of intermittent ventilation such as found where blowers and tubing are used.

4. Use safest available type of electrical equipment, wiring, and installations, when mechanical work is being done at or close to face, even where no explosive gas has been found.

5. Ample, safe clearance for workers around mechanical equipment used at or near faces. Moving belts, gears, etc., to be protected by adequate guards.

6. Reduce the noise of mechanical equipment to a minimum, so workers may hear the usual warning sound given by overhanging roof or rib material before it falls.

7. It is safer and less expensive to protect workers by use of cribs rather than to depend upon props. Use props as supplementary only.

8. Replace immediately timber torn out by machinery or blasting.

9. Place timbers before allowing loaders to start operations after blasting. Many accidents arise from failure to observe this rule.

10. Where at all feasible no blasting should be done while workers are in the mine. Safest method is where all explosives are held out

of the mine during working shift, all holes loaded after shift has departed, and firing done electrically from surface after men have left.

11. [This rule gives details of methods of blasting where above method is not practicable.]

12. [This rule gives details of methods of ventilation in mechanized mines.]

13. No nonpermissible electric locomotives (including cable-reel and nonpermissible storage-battery locomotive) should be allowed close to any face which gives off or is likely to give off methane.

14. Under no circumstances should trolley locomotives be used in return air or within 300 feet of any face that gives off or is likely to give off methane, or within 100 feet of any place where explosives are being used to charge drill holes.

Accident Record of Portland Cement Association, 1927

A STRIKING example of accident-prevention methods as a definite policy continuously applied is afforded by the Portland Cement Association, whose achievements in this connection during a period of nine years, 1919 to 1927, are set forth in the annual statistical number of the Accident Prevention Magazine (May–June, 1928) issued by the association. A production increase of more than 200 per cent in nine years, according to the report, has been accompanied by a steady decrease (except in 1920) in the number of accidents per 100,000 man-hours, this decrease amounting to 67.8 per cent in the entire period, and a decrease (except for 1920 and 1923) in the number of days lost per 100,000 man-hours, the decrease in the nine-year period amounting to 50 per cent.

A large table giving the detailed record of each plant participating in the safety movement each year, starting with 67 plants in 1919 and ending with 136 in 1927, sets forth data from which the following summary statement is derived, showing comparative figures for nine years on the basis of losses per 100,000 man-hours:

ACCIDENT RECORD OF THE PORTLAND CEMENT ASSOCIATION FOR 9 YEARS ON BASIS OF 100,000 MAN-HOURS

Item	Rate per 100,000 man-hours								
	1919	1920	1921	1922	1923	1924	1925	1926	1927
Accidents	4.35	4.38	4.24	4.17	4.16	3.53	2.7	2.2	1.4
Days lost	69.2	75.1	68.5	67.4	75.3	61.4	50.7	45.3	34.6
Permanent disabilities	.14	.14	.07	.08	.13	.09	.08	.063	.07
Fatalities	.08	.09	.07	.082	.056	.068	.06	.046	.032
Severity rate	669.6	727.7	617.6	650.4	541.1	586.9	502.4	396.5	298.9

The report comments upon this record by stating that although the reductions "are probably unparalleled in the history of the industrial safety movement, the greatest cause for rejoicing is in the sharp drop in accidents involving fatal termination." Fifteen fewer deaths in 1927 than in 1926 are recorded—a reduction of 33 per cent;

but in the 9-year period a very marked reduction is noted as revealed in the difference in the fatality rates per 100,000 man-hours, which for 1919 stood at 0.08 and in 1927 at 0.032, the latter rate being 60 per cent less than the former.

Again it will be observed that the severity rate as measured by the days lost per 100,000 man-hours shows a very decided improvement, the reduction being 55.4 per cent in 1927 as compared with 1919 and 24.6 per cent as compared with 1926.

Accident-Prevention Instruction in a Vocational School

THE following conclusions were reached as a result of a 4-year experiment in safety education work in the Essex County Vocational School at West Orange, N. J., and are given in a report[1] of the National Bureau of Casualty and Surety Underwriters.

The study was based on the assumption that instruction in accident prevention which was to be correlated with academic education would require, if it were to be worth the time and effort expended on it, a curriculum especially adapted to the accident experiences of the institution in which such curriculum was established. Furthermore, the instruction should include "certain appropriate elements derived from the accident experience of the industries and of so general a nature as to be always applicable." An instruction method was also needed that would impart to apprentices knowledge, ideals, and attitudes regarded as necessary for the more effectual avoidance of accidents both in the school shops and in the trade for which they were being prepared. The shop instructor was charged with the duty of giving the proper training in the skill and habits required for accident prevention.

The twofold form of instruction for the particular subject has proved "fundamentally sound."

The worker's ability to prevent industrial accidents is not, so far as he is concerned, wholly a question of skill or of automatically making the proper reaction, as many complex factors are involved even in the simplest, most mechanical, occupations. The safety of the worker is largely dependent upon "his mental attitude toward the whole safety idea and upon his knowledge of the possibility of a mishap occurring; that is, upon his ability to foresee and so prevent accidents." Moreover, the prevention of industrial accidents calls for organized effort; it is to a great degree "a matter of cooperation of workers with the management and of workers with their coworkers." Instruction in accident prevention, although it can not be made the duty of the shop instructor, may, under a proper curriculum and instruction method, be developed in the classroom.

The several steps in the construction of the curriculum for the related academic department accident prevention instruction were as follows:

1. Gathering information on the causes of accidents at the school over a three-year period.
2. Analyzing these data to discover the means of prevention.

[1] National Bureau of Casualty and Surety Underwriters. Educational series, Vol. III: Safety education in the vocational school. The construction of a curriculum for accident prevention, by Max S. Henig, New York, 1928.

3. Constructing a curriculum based on this information that was applicable to the school in the light of its own experiences only.

4. Completing the curriculum by the addition of (a) such topics as the experiences of industry have shown to be common sources of accidents in all industries, and (b) such as have value of a general nature in this field, particularly those which will serve to arouse interest and enthusiasm for the industrial safety movement.

The apprentices were given adequate opportunity to learn not only by study and discussion but also by actual doing. Volunteer suggestions for the improvement of shop conditions were encouraged. Accident-prevention committees were organized, safety campaigns were conducted, and the subject of accident prevention was closely correlated with the other subjects included in the program of the academic department. The resultant general active interest in accident prevention was indicated in a number of ways, such as in various suggestions for the improvement of safety conditions about the school and in its shops, in a disposition to work voluntarily along helpful lines outside of school periods, and in the quality of the work in the classroom.

Too many considerations are involved in the accident-prevention work of the school to admit of definite measurement of the resulting accident reduction.

Nevertheless, the figures for 1922–23, the first year the curriculum as a unit was put into effect, showed a reduction of 7 per cent in the accident rate as compared to the best previous annual score, that of 1919–20. It needs to be emphasized that, because of the natural difficulties arising in initiating any new system, particularly where responsibility is placed upon untrained boys, the figures for 1919–20 are in all probability somewhat lower than the facts would have warranted. Comparison of the accident figures of 1922–23 with those of the preceding year, when the efficiency of the members of the accident-prevention committees charged with the duty of reporting the occurrence of accidents is more clearly comparable, shows the substantial reduction of 44 per cent.

This experiment in safety education clearly shows, the author of the report points out, "the fitness of the vocational school as a laboratory for research in accident prevention."

A definite contribution is also made by this study to accident-prevention instruction both in vocational schools and apprenticeship schools of the industries. According to the author, both types of institutions seem to make a mistake by emphasizing and practically confining their safety education to training skill and habits. Both apply their instruction to a particular job. This is not the viewpoint of the leaders of the industrial safety movement, who now regard education and its resultant attitude as the "most potent factor in their campaigns against industrial accidents." This factor is dominant in the industrial safety instruction given in the academic department of the Essex County Vocational School for boys.

Occupational Diseases in Ohio in 1927

THE Ohio Industrial Commission reports a total of 1,051 occupational disease claims filed during the year 1927. While detailed statistics concerning the cause, severity, industry affected, etc., are not available at this time, the commission states, in a brief summary published in the Monitor, the bulletin of the commission, for

May, 1928, that there were 22 fatal cases, 1 permanent disability case, 549 claims on account of disabilities extending over seven days, 182 claims covering disabilities lasting for seven days or less, and 297 claims where no time was lost.

Most of the cases filed, amounting to 696 or 66.2 per cent, were due to dermatitis, a form of skin disease; and most of these were caused by various forms of dust, the number being 271, or 38.9 per cent. Other causes were: Liquids, 191, or 27.4 per cent; cutting compounds and lubricants, 140, or 20.1 per cent; oils, 66, or 9.5 per cent; fumes, 24, or 3.4 per cent; gases and vapors, 4, or 0.6 per cent. Many of these cases of dermatitis resulted in no loss of time.

Six of the 165 lead-poisoning claims reported resulted in death. In this connection the commission states that it is making every effort to impress upon employers and employees the dangers present in the handling of any compound containing lead and to insist upon the necessary precautions being taken to prevent the development of lead poisoning.

Other claims filed covered poisoning by mercury, arsenic, copper, benzol, anilin, phosphorus, etc., and 76 claims were filed which were not entitled to compensation under the Ohio act.

Pipe-Tool Accidents in the Petroleum Industry in Oklahoma

THE use of pipe tools appears to be a rather serious hazard of the drilling and producing departments of the petroleum industry in Oklahoma, according to a survey made by the United States Bureau of Mines and published in its Technical Paper No. 422. Nearly one-fifth of all drilling and producing machinery accidents in that State in 1923, the only year covered, were caused by these "fingers" of the industry, upon whose smooth mechanical functioning and correct method of manipulation so much depends. The report tabulates 142 accidents, 3, however, being charged to underreamers, which are drilling tools rather than pipe tools, and states that few of these accidents "could be placed under that indefinite heading commonly called 'unavoidable.'" Included as pipe tools are tongs and wrenches, swivel wrenches, circle jacks, and casing poles.

While the total number of pipe-tool accidents tabulated is admittedly small, being but 19.3 per cent of the 720 accidents due to machinery and equipment at drilling and producing wells, they caused a time loss of 4,486 days, which is 10.2 per cent of the total time loss caused by all of the 720 accidents noted above. Besides, no fatal cases are included, since the Oklahoma law does not require the reporting of such cases to the industrial commission, and "undoubtedly there were fatal accidents during the year caused by pipe tools."

The table following summarizes the essential data brought out by the investigation:

SUMMARY OF PIPE-TOOL ACCIDENTS IN THE OKLAHOMA PETROLEUM INDUSTRY IN 1923

Item	Accidents		Days lost		Permanent partial-disability cases
	Number [1]	Per cent of total	Number [2]	Per cent of total	
Tongs and wrenches:					
Rotary	48	34.5	1,722	38.4	5
Cable	34	24.5	1,399	31.2	6
Pulling wells	21	15.1	534	11.9	1
Total tongs and wrenches	103	74.1	3,655	81.5	12
Swivel wrenches	4	2.9	155	3.5	1
Circle jacks	26	18.7	532	11.8	0
Casing poles	6	4.3	144	3.2	0
Total pipe-tool accidents	139	100.0	4,486	100.0	13
Underreamers	3	----------	402	----------	2

[1] Includes permanent partial-disability cases.
[2] Oklahoma schedule of weighting for permanent partial-disability cases.

The report includes an illustrated description of the use of the various types of pipe tools and concludes with suggestions for avoiding accidents. These include (1) systematic and frequent inspection of tools, (2) proper instruction of the workers in the use of these tools, and (3) insistence by the drilling companies that all employees be in good physical condition and alert at all times.

HEALTH AND INDUSTRIAL HYGIENE

Cost of Hospitalization

MUCH interest is being manifested at the present time in the problem which the wage earner is obliged to meet when confronted with serious sickness either of himself or of members of his family, the belief seeming to be quite general that the costs of medical and hospital care are excessive and present an unfair burden to the person of average means. In an article in the Modern Hospital, June, 1928, by John A. McNamara entitled "Correct those wrong ideas," the writer presents figures and arguments to show that the belief that hospitals are badly managed and operate at unreasonably high costs is not justified by the facts.

It is estimated that 10,000,000 of the 120,000,000 people in the United States pass through the hospitals each year, so that the average citizen may expect to visit the hospital once in 12 years; if he is the head of the average family of four he may expect to have a hospital bill for some one of the family on an average every three years. It is estimated that the average hospital cost, including the physician's fee and special nurse is $300, so that the allowance for sickness in the annual budget would be only $100 a year.

Considerable publicity, the writer states, has been given recently to statements that hospitals are charging too much, that they are badly managed, and that superintendents are inefficient. In order to ascertain, therefore, whether costs are actually too high, figures were secured from a number of large hospitals as to the operating costs and the charges to the patients in 1913 and 1926. Costs were obtained from four hospitals in Chicago, all of which do a large amount of free work, while none of them receive grants from the municipality, State, or Government, and in all of them the executives are paid adequate salaries. In 1913 the average per capita cost per day in these four hospitals was $2.83, which had risen in 1926 to $6.65, an increase of 135 per cent. One of these hospitals charged $2 per day for its ward beds in 1913 and $4 in 1926, an increase of 100 per cent, and the charge for private rooms had increased from a range of $4 to $8 per day in 1913 to a range of $6 to $10 in 1926, or only 33 per cent. The average increase for both types of service amounted, therefore, to only 66 per cent as compared with an increase of 135 per cent in the cost of operating the four hospitals. The average length of stay per patient had been reduced, moreover, from 15 days in 1913 to 12 days in 1926, with the result that a patient using the highest-priced room in 1913 would have paid $120 for his 15-day stay, while in 1926 a patient using the same room at $10 a day would have paid exactly the same amount, $120, for a stay of 12 days. These figures do not, however, include charges for special treatments, but investigation has shown that these special services do not add on an average more than $50 to the hospital bill. Summing up these figures, the writer says:

Costs have increased 135 per cent; charges have increased a maximum of $50 or approximately 42 per cent due to special charges; patients have been returned to society three days earlier than previously, thereby causing an economic saving to industry of approximately $15 represented by the average earning power per man. If this can be logically deducted from the increased cost, the increase is but 29 per cent.

A further study of costs in seven hospitals in different parts of Pennsylvania confirmed the results of the Chicago study. The average cost per patient in these institutions in 1913 was $1.98 per day, which in 1926 had increased to $4.41, an increase of 123 per cent. The charge for a bed in a ward increased from $1.68 in 1913 to $3.15 in 1926, or 88 per cent, in both cases this charge being less than cost. The average maximum charge for a private room in the seven hospitals in 1913 was $5 and in 1926 $9.07, the increase amounting to 81 per cent. As in Chicago the reduction in the average time spent in the hospital has also operated to reduce the costs, so that it is estimated that the cost to a patient in the highest-priced room for the average hospital stay had been reduced from $72 in 1913 to $70 in 1926.

In contrast to these reductions in the cost of hospital service, the writer points out the increases in the cost of various other public services. Thus it has been shown that public-school taxation had increased in 146 cities of more than 30,000 population an average of 207 per cent since 1916, the cost of health and sanitation departments had advanced 156 per cent, while charities and hospitals including correctional institutions show an increase of only 114 per cent, by far the smallest amount.

Although it appears from the figures quoted that the public is in error in believing that hospital costs have advanced unreasonably, there is evident a desire on the part of the management of different hospitals to operate these institutions so that they will be of maximum benefit to the community. In the same issue of the Modern Hospital (pp. 61, 62) an account is given of the plans of a hospital in Grand Rapids, Mich., for standardizing and reducing costs.

Laboratory and X-ray work are playing an increasingly important part in the diagnosis of disease, and since all these facilities are available in a hospital, physicians frequently have their patients go to a hospital for a short time for observation and examination. As the amount of laboratory and other work varies with the case, it is impossible to determine beforehand the cost to the patient, and this uncertainty undoubtedly keeps many patients from availing themselves of this service. To meet this situation, therefore, the board of trustees of the hospital established a flat rate of $25 for a two days' stay if the patient is in a ward and $35 if he occupies a private room, this rate covering all services in connection with the diagnosis asked for by the physician. The desirability of making the benefits of hospitalization in maternity cases available to a larger number has also been recognized by the management, and flat rates covering all expenses during the average 10-day stay in the hospital for this class of cases have been fixed for ward patients and those in semiprivate or private rooms. Through these and other plans which have not yet been put into effect, it is considered that the field of usefulness of the hospital can be greatly extended.

Health of Office Workers

A STUDY [1] of health conditions among office workers has been made by Dr. Wade Wright of the Metropolitan Life Insurance Co. which shows the extent of absenteeism on account of sickness and also some of the more important diseases which cause absence from work among this class of workers.

The fact that the number of clerical workers in this country is approximately 3,700,000, or nearly half the number of industrial wage earners, is sufficient reason for consideration of health conditions among them, since the health problem of such a large body of workers is of great importance both in its relation to public health and to the successful operation of commerce and industry.

The high morbidity and mortality rates among clerks have been a matter of observation among persons interested in industrial medicine for many years, among the diseases noted by earlier writers on industrial diseases being gastrointestinal disorders, writers' cramp or palsy, and headache. Interest in the health of clerks was rather crowded out, however, some years ago when attention was fixed on the more spectacular industrial poisons, but within the past few years the development of medical services in large commercial and mercantile organizations has resulted in renewed interest being taken in the health of office workers.

There are certain factors which are common to most clerical groups. Thus office workers are predominantly feminine and unmarried and young rather than middle-aged or aged, they are largely city or town dwellers, and they may present a selection of persons many of whom are physically substandard. According to the 1920 census, over 51 per cent of the more than two and one-half million clerks other than those in stores were females, while of the Metropolitan headquarters office clerical force almost 80 per cent are females.

The preponderance of youthful workers is shown by the fact that nearly half of all persons in selected clerical occupations according to the last census were between the ages of 15 and 24 years. Of females alone, 57.9 per cent were in the age group 15 to 24 years, and many of the next age group in the census classification, 25 to 44 years, were without doubt still in the twenties. Of all persons in two large classes in the census report, "other clerks," and "stenogaphers and typewriters," over 51 per cent of both sexes and 61 per cent of the females were in the age group, 15 to 24 years.

A study of causes of death by occupation [2] among white industrial policyholders insured by the Metropolitan Life Insurance Co. for the period 1911 to 1913 showed that among both male and female clerks the mortality was much greater between the ages 15 to 44 than for all the occupational groups combined. Tuberculosis of the lungs was the most important single cause of death among both men and women, the rate being highest for this disease in the age group 15 to 24. A study of similar experience among male clerks for the years 1922 to 1924, as yet unpublished, shows that the mortality rate for the age group 15 to 44 was 62.1 per cent as compared with

[1] Wright, Wade, M. D.: The health of office workers. New York, Metropolitan Life Insurance Co. [1927]. [Reprinted from proceedings of convention of the Life Office Management Association, Atlantic City, Oct. 6–8, 1927.]

[2] Bureau of Labor Statistics Bulletin No. 207. Washington, 1917.

70 per cent 11 years earlier. A corresponding reduction in the percentage of deaths from tuberculosis of the lungs took place in the different age groups. Pulmonary tuberculosis is still the chief cause of death before the age of 45, however, causing 23.9 per cent of the total number of deaths against 14.5 per cent from heart disease. The principal causes of death in the order of their importance were found to be tuberculosis of the lungs, heart disease, influenza, pneumonia, Bright's disease, and accidental violence, the relative importance being practically the same as in earlier years with the exception of influenza and pneumonia which in the later study occupied third and fourth place. A high incidence of typhoid fever which caused 1.3 per cent of all deaths was the most striking feature of this period, the rate being more than twice that for all occupations combined. The average age at death was 39 years, a gain of 2.5 years over that shown in the previous study. Comparison of crude proportionate mortality figures shows that the rates for tuberculosis among clerks are exceeded only by soldiers, miners (other than coal), pottery workers, and sailors, but if the rates are corrected for age the rates among the occupational group are exceeded by at least ten other occupational groups, all of which, however, are recognized as suffering very high tuberculosis death rates.

Although similar data for female clerks for the period 1922–24 are not available, the mortality from tuberculosis among young women generally has not declined in proportion to the general reduction in the mortality from this cause among all age groups for both sexes. The reduction has been much more marked among males, the peak of the death rate shifting to later in life, but while the female rate for all ages has improved it is notably higher among young women, particularly in the group aged 20–24.

Morbidity Rates

THE morbidity data for office employees of the company relate to absences on account of sickness of one day and more and cover more than 10,000 employees. As in similar studies, the records showed that there was more frequent sickness among women but that the average loss of time per absence was greater among men. In 1925, the year for which the data are shown, males lost 8.82 working-days per clerk-year exposed and females 12.44 working-days, 141 per cent of the male rate. The absence per case among men, however, averaged 7.08 days per case and among women 4.41 days. The cases of absence per clerk-year amount to 1.246 among males, while among females there were 2.824 or 226 per cent of the male rate.

One and two day absences constitute a large proportion of the sickness absences both in offices and in industrial plants. Among the group studied they remain relatively constant from year to year at about 70 per cent for men and nearly 80 per cent for women. Such absences are naturally higher in establishments where no loss of pay is entailed through the absence. Although the time lost through short absences is not negligible, it is much less in the aggregate than that due to the longer absences. The days lost per clerk-year, excluding the one and two day absences, amounted to 7.77 for males and 9.82 for females, the rate for the women being 126 per cent of

the male rate instead of 141 per cent when the total number of absences is considered.

The study afforded evidence that absence on account of sickness varies quite directly with age. Thus only 20 per cent of the girls under 20 were absent more than three times as compared with 34 per cent of those 20 to 24 and 30 per cent of those 25 to 29.

The diseases causing the greatest amount of lost time among males were respiratory diseases (including tuberculosis), which caused about 50 per cent of the lost time, followed by diseases of the digestive system and of the circulatory system. Among females about 40 per cent of the time lost was due to respiratory diseases, 20 per cent to digestive diseases, slightly more than 10 per cent to diseases of the nervous system, and a little less than 10 per cent to diseases of the genito-urinary tract.

In addition to the sickness among the force which resulted in lost time, a large amount of medical attention was furnished by the company. In 1925 and 1926 the dispensary visits totaled more than 150,000. The most important cause of disability was the acute respiratory diseases including such conditions as colds, grippe, tonsillitis, laryngitis, etc., while dysmenorrhea was second in importance, followed by gastrointestinal disease, surgical conditions, headaches, skin diseases, and a great variety of other conditions. The company clinic is attended by both sexes and is used by between 85 and 90 per cent of the personnel during the year. There is little change from year to year in the proportionate distribution of the various maladies.

Conditions frequently met with in offices which are conducive to ill health are poor ventilation, poor illumination, and bad seating, which, together with bad habits and fashions, and lack of proper exercise, is responsible for the generally poor posture of office workers. Most of these conditions can be remedied. "Employers of clerical workers," the writer says, "can not ignore the importance of the problem of time and efficiency lost through disease, and it is almost inevitable that they share with their employees the burden of maintaining some mechanism for the relief and control of the situation. The problem is not so much the reduction of sick absenteeism to the lowest possible limit as it is the maintenance of the healthiest possible group of workers."

Community Recreation in the United States in 1927

THE community recreation movement made substantial progress during 1927, according to reports [1] from 815 cities throughout the country which maintain community recreation plans under trained leadership. The number of cities reporting recreation programs for the community had increased from 505 in 1922 to 815 in 1927, and the number of trained workers from approximately 11,000 to nearly 20,000. In addition to these paid workers, 203 cities reported that 7,025 trained volunteers assisted in carrying out the recreation programs. The number of cities employing workers throughout the year had increased from 215 in 1922 to 321 in 1927.

[1] The Playground, New York, June, 1928, pp. 113-121.

Training classes for paid workers were maintained by 146 cities and for volunteer workers by 82 cities.

Separate play areas in charge of recreation leaders numbered 10,770, an increase of 647 over those reported in 1926. The facilities provided include 6,301 outdoor playgrounds, 2,156 indoor recreation centers, and 349 community houses, part of these facilities being provided for colored residents. The outdoor playgrounds had an average daily attendance of more than 1,400,000 persons, including both participants in the sports or games and spectators. The indoor recreation centers had an average daily attendance of nearly 300,000 and the community houses an average attendance of 46,000.

Other recreation facilities reported include 403 bathing beaches in 214 cities, 840 swimming pools in 364 cities, 227 streets closed for play in 31 cities, 263 golf courses in 180 cities, 231 summer camps in 82 cities, and 694 play areas which do not come under the foregoing classifications in 52 cities. In addition a large proportion of the cities report tennis courts, baseball fields, and athletic fields.

The majority of the recreation programs are under the direction of municipal recreation commissions, departments, or boards, and in a number of cities municipal and private departments are combined in the management of playgrounds and community centers. About 280 cities report that private organizations maintain part or all of the recreation facilities.

Of 658 cities reporting on the sources of support for community recreation, 394 were carried on by means of municipal funds, 97 by private funds, and the remainder by a combination of municipal and private funds and appropriations from the county or State. The total expenditure for public recreation in 1927 as reported by these cities amounted to $32,191,763.

Physique of Women in Industry

A BRITISH study [1] on the physique of women in industry was carried out for the purpose of determining the actual load that can be lifted or carried by women or young workers under industrial conditions without injury or discomfort. As a part of the study, anthropometric data of 4,366 women engaged in different occupations were secured, these data covering weight, height, length of arm, distance of finger tips from ground (standing) and three physical-strength tests, two of which involved the use of muscles ordinarily employed in industrial practice. The other features of the problem studied were the physiological cost of the various methods of load carrying to the individual worker and the determination of the loads actually carried by women in industrial operations.

The groups of women examined included workers employed in 26 factories between Glasgow and London, a small group of unemployed women, and a control group made up of 460 Scottish woman students in a teachers' training college in Glasgow.

Among the women studied who were employed on very heavy work were 40 girls working as navvies in a chemical works for 10

[1] Great Britain. Industrial Fatigue Research Board. The physique of women in industry. London, 1927.

hours a day and about 60 women employed in a brick works in brick molding and on the very heavy work of filling and emptying the ovens. In the chemical works, the report states, all the women worked with ease and were barefooted. The carriage and physique of these women were remarkable, in spite of the fact that they were drawn from the district immediately surrounding the factory, one of the worst in Glasgow. An example of the astonishing amount of work of which these workers were capable is that of a woman who shoveled 20 to 25 tons of crude borite a day, lifting it to a height of two and one-half feet. Five girls, shoveling crystals from evaporating pans into trucks which they wheeled for a considerable distance along very imperfect rails, had an average output for the group of 6 tons per day. In the brick works, girls carried loads of bricks weighing nearly a hundred pounds for a distance of 70 to 80 yards. The strength of the girls in these two industries was very much greater than in any of the other trades, showing that the heavier and more strenuous occupations tend to attract the stronger women.

One of the surprising results of the study was the generally superior physical development found among the group of college women who were selected as representatives of sedentary workers. These young women formed a selected group in that more than half of them were born and brought up in country districts, they were required to pass a strict physical examination for admittance to the college, they were required to do a certain amount of gymnastic work a week, and in addition all played outdoor games such as tennis and hockey. On the other hand, while they were from good sound stock, they were not in affluent circumstances. The college women were superior to the group of employed women in weight and height and they excelled in all three of the tests of muscular strength, while the group of employed women in their turn had a considerably higher average in all these points, except weight, than the group of unemployed women. The comparison of the physical development of members of these groups on the basis of environment shows, the report says, that generally speaking, there is no doubt that the physique of the town dweller is inferior to that of the country dweller.

In connection with the question of weight carrying, about 550 observations were made in the different industries as to the loads actually carried or lifted, the subjects tested being placed in three groups—14 to 16, 16 to 18, and over 18 years of age. In industries in which the weight of the load is definitely fixed, it seemed that women were not generally required to lift and carry a load heavier than that for which they were adapted, but in industries in which the weight of the load was left to the choice of the operative it was found that young persons, especially males, were inclined to attempt to lift loads beyond their capacity.

The special study of the physiological effects of the different methods of lifting and carrying loads resulted in the conclusion by the investigators that the weight of the individual load when well adjusted should not exceed 40 per cent of the body weight for continuous and 50 per cent for intermittent or occasional carrying, which was equivalent on the basis of the average body weight to about 45 and 55 pounds respectively. It was considered, however, that this amount might

be increased as much as 20 per cent when the load is compact and easily handled so that it does not interfere materially with the gait and balance of the worker. In the case of adolescents, however, it was concluded, on account of the plastic condition of the body with the consequent dangers from overstrain, that the load for young girls from 14 to 16 years of age should not exceed a limit of 25 to 30 pounds, and for girls aged 16 to 18 years the limit should be 40 pounds.

Poisoning from Chromium Compounds

THE development of a number of cases of chrome poisoning and chrome ulcers in connection with the manufacture of automobiles and automobile accessories is reported by Dr. Jackson Blair in the Journal of the American Medical Association, June 16, 1928.

The use of chrome plating in producing a rust-proof, nontarnishing finish for headlights, radiator shells, door handles, and other automobile parts and accessories has recently become general and has added, it is said, very materially to the number of cases of chrome poisoning.

The series of cases reported here included 12 treated by the writer which occurred in two separate plants among workers engaged in the process of electroplating automobile accessories. The electrolytic solution used contained chromic acid which was given off over the tank in a spray so fine as to appear almost as a gas. The workers inhaling these fine particles developed symptoms similar to those of a severe cold, with sneezing, watery discharge from the eyes and nose, and itching and burning of the nose, the last symptom being particularly marked when the workmen came in contact with the fresh air outdoors. Four of the 12 patients presented these symptoms; two of these had marked congestion of the mucous membrane of the nose with small ulcers, one had a large ulcer on the septum, and the fourth had a perforated septum.

The other eight patients who were engaged in removing the plated parts from the tanks did not present the nasal symptoms, but all had ulcerative lesions of the hands—the so-called "chrome holes" or "chrome ulcers." Other symptoms present were discoloration of the skin and finger nails. The ulcers which had developed only where there had been a preceding scratch, cut, or break in the skin were deep and painful with sloughing of the entire layers of the skin.

The measures taken to correct the condition included the installation of an efficient ventilating system with hoods over the tanks, the provision of long-sleeved rubber gloves for those workers whose hands came in contact with the solution, and the use of petrolatum inside the nose of workers who might come in contact with the fumes. Respirators were used for a short time but the ventilating system proved to give efficient protection from the development of the nasal symptoms. A 5 per cent solution of sodium hyposulphite was found completely to neutralize the chromic acid on the hands of workers not using gloves.

Pulmonary Conditions Among Mine Employees, Western Australia

THE extent of the silicosis and tuberculosis hazard among employees in the metalliferous mines of Western Australia was the subject of a special investigation [1] by the Division of Industrial Hygiene of the Commonwealth Department of Health in 1925–26.

The miners' phthisis act, passed in western Australia in February, 1923, provided for the removal from the mining industry of persons suffering from pulmonary tuberculosis and the payment of compensation to such persons until suitable employment was found for them. The application of the act was deferred, however, pending a complete medical survey of persons engaged in the metal mines of that part of the country, and in the meantime the Western Australian workers' compensation act was amended to provide compensation for certain mining diseases. The medical survey which was undertaken in September, 1925, was intended to provide a correct valuation of the cost of compensation to sufferers from silicosis.

The miners examined were nearly all employed in gold mines in which analysis of the air samples showed that the amount of free quartz or silica of 10 microns [2] and under present in the dust averaged 19 per cent. Silica particles below 0.25 micron or above 10 microns are considered to be harmless, but within these limits if inhaled in sufficient quantities they give rise to the condition known as silicosis. It is considered that it is inadvisable for men to work in air in which the dust counts exceed 300 particles per cubic centimeter, but the analysis of the dust content of the air in many of the mining operations both above ground and underground showed that in numerous instances the number of particles were considerably in excess of this amount, 150 samples of air underground after firing and in dead ends showing an average of more than 1,000 particles per cubic centimeter, while of 1,595 samples of air taken underground 35 per cent had dust counts exceeding the arbitrary limit of 300 particles of dust per cubic centimeter.

Physical examinations were given 4,067 men, all of whom were employed in gold mines with the exception of 108 who were working in lead mines and 48 who at the time of the examination were engaged in road making but had shortly before been employed as lead miners.

Silicosis, which is a condition in which areas of fibrous tissue occur in the lungs, is frequently complicated with some other infectious process, the commonest form of complication being that due to the tubercle bacillus. The different conditions shown by the medical and the X-ray examinations were classified, therefore, as silicosis, silicosis and tuberculosis, and tuberculosis. The number of surface workers examined totaled 1,759, of whom 117 or 6.6 per cent were suffering from silicosis, 27 or 1.5 per cent from silicosis and tuberculosis, and 6 or 0.3 per cent from tuberculosis only. Of the 2,308 underground workers examined, 538 or 23.3 per cent were silicotic, 116 or 5 per cent had silicosis and tuberculosis, and 6 or 0.3 per cent were

[1] Australia. Department of Health. Report on an investigation of the pulmonary conditions of mine employees, Western Australia, during the years 1925-26, by W. T. Nelson, M. D. Canberra (n. d.).
[2] Micron = $\frac{1}{25400}$ of an inch.

suffering from tuberculosis alone. Of the total number of men examined, therefore, 798 or 19.6 per cent presented definite evidence of pulmonary silicosis and 155 or 3.8 per cent of tuberculosis, only 12 of the latter having tuberculosis without silicosis.

The incidence of silicosis shows a steady increase with age and with length of service. Thus, no case of silicosis was found either among the surface or underground workers before the age of 30, but after that age there was a steady increase, the largest proportion of cases occurring after the age of 45. Of the 116 cases of silicosis with tuberculosis occurring among the underground workers, 66 per cent occurred between the ages of 46 and 60.

The effect of length of employment is shown both among the underground and surface workers. Among surface workers the highest percentage affected, 16.7 per cent, was found in the group having worked 41 to 50 years, but among the underground workers who had a much more severe exposure to silica dust the effect of the exposure became marked after 20 years' employment underground, more than 50 per cent of such workers suffering from silicosis, while 73 per cent of those having worked from 36 to 40 years were silicotic.

The underground operations which furnished the majority of these cases were stoping, that is the actual mining or breaking out the ore, and development work, which covers all the work of opening up a mine—sinking shafts, "driving levels," and cross-cutting off a level in various directions. In all these operations, men are exposed to quantities of dust from blasting and drilling, often in places which can not be adequately ventilated.

In summing up the results of the physical findings of the examinations the report states that the condition of generalized fibrosis of the lungs found in silicosis gives a characteristic mottled appearance to the X-ray pictures of the lungs; high blood pressure and albuminuria are common among the miners affected, and silicosis causes a marked reduction in the vital capacity of the persons affected. Unlike tuberculosis, silicosis does not have an appreciable effect on the body weight.

WORKMEN'S COMPENSATION

Recent Workmen's Compensation Reports

Illinois

THE Department of Labor of the State of Illinois in its ninth annual report, for the year ending June 30, 1926, presents a statistical analysis of experience under the workmen's compensation act during that year. The two tables following summarize the tables found in the report:

TABLE 1.—AMOUNT OF COMPENSATION PAID, BY NATURE AND EXTENT OF DISABILITY

Nature of injury	Deaths	Permanent partial disability	Temporary partial disability	Temporary total disability	Specific loss	Loss of use	Disfigurement	Total
Bruises, contusions, abrasions, etc	$130,562	$96,994	$1,085	$769,591	$94,425	$707,659	$50,881	$1,851,197
Burns and scalds	14,556	16,203	-------	110,623	4,310	58,906	14,851	219,449
Concussions	27,952	6,315	-------	6,797	243	9,604	88	50,999
Cuts, lacerations	20,400	31,173	475	338,872	88,510	442,336	95,923	1,017,689
Punctures	15,700	2,579	85	84,148	15,306	84,665	2,286	204,769
Amputations, traumatic	542	6,580	31	36,486	399,459	152,253	5,381	600,732
Dislocations	1,737	95	5	21,252	3,285	26,122	90	52,586
Fractures	89,756	78,535	896	507,176	75,778	716,880	6,844	1,475,865
Sprains, strains	7,881	39,755	365	399,306	1,485	120,236	1,176	570,204
Asphyxiation	-------	-------	-------	2,064	-------	1,889	-------	3,953
Drowning	4,368	-------	-------	649	-------	1,168	-------	6,185
Electrical shock	30,013	-------	-------	459	-------	1,321	180	31,973
All other	[1] 94,733	9,077	19	68,735	416	83,274	3,583	259,837
Not reported	6,405	8,421	-------	5,757	1,057	8,062	681	30,383
Total	[1] 444,605	295,727	2,961	2,351,915	684,274	2,414,375	181,964	6,375,821

[1] Including 1 permanent total disability case, for which $10,703 was paid in compensation.

TABLE 2.—NUMBER OF ACCIDENTS, BY CAUSE AND EXTENT OF DISABILITY

Cause	Death	Permanent partial disability	Temporary partial disability	Temporary total disability	Specific loss	Loss of use	Disfigurement	Total
Prime movers	[1] 23	25	10	4,419	741	1,219	219	6,656
Vehicles (not including construction of)	21	59	11	3,320	81	839	348	4,679
Automobiles and other power vehicles	37	22	10	3,556	30	255	48	3,958
Explosions—electricity, fires, and hot substances	23	9	-------	2,031	5	85	54	2,207
Poisonous—corrosive substances and occupational diseases	3	2	1	639	1	24	6	676
Falls of persons	31	55	10	5,151	13	479	53	5,792
Stepping on or striking against objects	8	17	4	3,442	15	314	206	4,006
Falling objects—not being handled by injured	16	75	13	6,124	91	1,157	614	8,090
Handling of objects	7	55	15	9,126	154	804	256	10,417
Hand tools	2	10	6	2,334	53	378	183	2,966
Animals	5	6	1	514	4	59	29	618
Miscellaneous causes	24	5	1	542	7	61	12	652
Flying objects	-------	3	-------	674	-------	212	18	907
Not reported	5	1	-------	169	4	30	10	219
Total	[1] 205	344	82	42,041	1,199	5,916	2,056	51,843

[1] Including 1 permanent total disability case.

New York

THE annual report of the industrial commissioner for the year ending June 30, 1927, includes a report of the State insurance fund covering the calendar year 1926, which has been reprinted as a separate pamphlet.[1] This report points out that during 1926 the fund had "a more rapid growth * * * than has been experienced in any other period in State fund history." At the close of business December 31, 1926, there were 17,462 employers insured with the fund, an increase of 1,744 during the year. Premiums for the year amounted to $6,949,772, representing an increase of $2,703,343 over the previous year. During 1926 the reserve for unpaid losses increased from $6,505,646 to $7,667,903 and the surplus increased from $2,125,599 to $2,197,663, in addition to which $250,000 was set up in 1926 as a reserve for security fluctuation. The total admitted assets of the fund rose from $10,394,734 to $12,787,593, which was a net increase of $2,393,204.

According to the report, "the loss ratio decreased from 75.4 per cent for the year ended December 31, 1925, to 73 per cent for the year ended December 31, 1926, and the expense ratio from 18.4 per cent to 17.7 per cent." The loss ratios in 1923 and 1924 were 78.8 and 79.4 per cent, respectively.

The report attributes these results to the following factors:

1. Increased industrial activities during the latter part of 1925 and during 1926.
2. The general rate revision which became effective June 30, 1925, resulting in an increase of approximately 10 per cent and substantially higher advance premium payments on new policies and policy renewals dated June 30, 1925, or thereafter.
3. The large number of additional policies issued.
4. The improvement within the State fund organization and the progress made in methods of handling the business.

As to the fourth factor, the report quotes the findings of the New York State Industrial Survey Commission appointed by the 1926 legislature to study conditions in industrial and mercantile establishments, as follows:

> There is no doubt but that the State insurance fund as at present administered is performing an exceptional service. In general its initial premium is on the average of 15 per cent below the rate of the causalty companies. In addition it has returned to its policyholders on the average dividends amounting to approximately 15 per cent annually. This dividend combined with the reduction in the initial rate has reduced the actual cost of compensation to the employer approximately 27½ per cent. All those concerned in the administration of this fund are entitled to commendation.

Oklahoma

THE State Industrial Commission of Oklahoma, in its twelfth annual report, for the year ending August 31, 1927, presents a review of the experience under the workmen's compensation act

[1] New York. State insurance fund. Progress and development of the State insurance fund. (Extract from the annual report of the industrial commissioner for fiscal year ended June 30, 1927.) New York, 1927.

of that State. The table following is a summary of one of the most important tables found in the report:

NUMBER OF COMPENSATED ACCIDENTS, TIME LOST, AMOUNT OF COMPENSATION AND MEDICAL AID, AND DAILY WAGES OF INJURED PERSONS

Cause	Number of accidents	Time lost (man-days)	Compensation	Medical aid	Daily wage
Machinery	925	162,689	$185,459	$22,014	$4,929.50
Cotton and cottonseed products machinery	250	51,574	53,275	2,171	1,027.10
Elevators	86	12,303	11,296	1,772	494.60
Cranes and derricks	1,092	145,035	192,804	19,592	7,413.10
Vehicles	2,053	85,209	127,996	27,498	10,069.40
Handling explosives	31	2,277	2,740	1,733	158.10
Handling rock ore, timer, and drills	1,580	39,058	57,004	5,047	7,830.60
Shaft accident, N. O. C	110	7,025	9,458	1,452	559.30
Haulage	2	1,811	1,326	418	7.50
Falls of persons	13,679	241,495	409,813	93,778	70,111.50
Hand tools	4,763	97,163	114,176	25,734	25,902.30
Handling objects	9,842	218,541	353,505	96,624	49,688.10
Sharp or rough objects	4,625	37,102	30,637	5,700	26,709.60
Electricity, explosives, hot and corrosive substances	4,911	125,629	190,692	37,565	26,260.99
Total	43,944	1,226,911	1,740,181	341,098	231,161.09

Virginia

THE biennial report of the Industrial Commission of Virginia, for the period from October 1, 1925, to September 30, 1927, contains four tables, one summarizing the injuries and awards for the period, another containing experience by insurance carriers, a third containing experience by industrial groups, and the fourth showing the data by counties and cities. The figures in the report are based on closed cases except those for permanent injuries and fatalities, which represent awards by the commission. The information contained in the report is summarized in the table following:

NUMBER OF CASES AND AMOUNT OF COMPENSATION PAID, OCTOBER 1, 1925, TO SEPTEMBER 30, 1927, BY INDUSTRY GROUP

Industry group	Fatalities		Permanent partial disability		Temporary total disability	
	Cases	Compensation	Cases	Compensation	Cases	Compensation
Transportation	7	$14,569	32	$10,841	423	$18,354
Utilities	17	40,222	26	22,640	484	22,266
Tobacco			32	9,149	229	6,049
Food	7	16,899	56	28,989	500	17,090
Paper and pulp	5	10,523	39	18,337	284	10,572
Wood products	34	62,333	517	172,266	2,396	89,442
Blast furnaces, steel works, and rolling mills	1	547	24	14,657	247	8,236
Metal goods, including foundries	2	5,336	62	24,823	455	16,038
Textiles	8	19,236	57	29,555	429	15,315
Stone products	5	13,525	21	7,923	235	9,797
Chemical and allied products	13	31,876	39	24,346	449	17,939
Construction	52	115,651	307	191,419	1,989	103,994
Mining	139	369,043	641	374,716	3,807	207,476
Trade	23	69,535	99	55,133	1,149	49,442
Other	9	21,510	132	62,114	886	36,830
Total	322	790,805	[1] 2,084	[1] 1,046,907	13,962	628,839

[1] Including 19 cases of permanent total disability for which $80,184 in compensation was paid.

Wyoming

THE twelfth report of the Workmen's Compensation Department of the State of Wyoming, covering the year 1927, contains an analysis of compensation awards in which the total amount allowed

for claims was divided as follows: For death claims, 33.25 per cent; for permanent total disability, 3.21 per cent; for permanent partial disability, 19.34 per cent; for temporary total disability, 29.27 per cent; for medical and hospital services, 13.78 per cent; for investigation, 1.06 per cent; and for witness fees, 0.09 per cent.

Following is a summary of the detailed table found in the report:

NUMBER OF CLAIMS ALLOWED AND AMOUNTS AWARDED IN WYOMING, BY INDUSTRY AND DEGREE OF DISABILITY, 1927

Industry	Supplemental awards	Original awards for disability	Amount awarded for—			
			Fatal cases [1]	Permanent total disability [2]	Permanent partial disability [2]	Temporary total disability [2]
Building work	31	57	$2,000.00	$7,370.00	$2,387.83	$5,415.06
Coal mining	246	515	48,815.93	2,357.80	25,733.41	56,079.21
Garages	9	21			5,316.66	1,943.93
Iron-ore mining	4	39	3,000.00		266.66	3,155.04
Logging	15	38	3,600.00		1,412.50	3,080.96
Oil drilling	16	81	7,228.67		7,990.99	5,240.65
Oil refining	225	236	76,539.34		26,799.99	27,955.92
Road and street construction	22	51	5,040.00		5,877.50	5,415.78
Sugar manufacturing	89	39	1,000.00	180.00	1,766.66	7,677.21
Teaming, transferring, and trucking	24	17			550.00	2,500.26
All other industries	64	112	595.33	4,517.00	8,883.33	13,197.92
Total	745	1,206	147,819.27	14,424.80	86,985.53	131,661.94

[1] Not including funeral expenses.
[2] Not including medical expenses, investigations, and witness fees.

British Columbia

THE eleventh annual report of the Workmen's Compensation Board of the Province of British Columbia, for the year ending December 31, 1927, contains information concerning the experience of that Province. A summary of the more important statistical information contained in the report may be found in the two tables following:

TABLE 1.—NUMBER OF CLAIMS AND AMOUNT PAID ON ACCOUNT OF ACCIDENT CLAIMS CLOSED DURING 1927, BY INDUSTRY GROUPS

Industry group	Temporary total disability		Permanent partial disability		Fatalities			
					Pension awards		Burial awards	
	Number of claims	Compensation paid	Number of claims	Compensation paid	Number	Reserve	Number	Amount
Lumbering, etc	6,743	$535,693	402	$385,789	41	$194,825	87	$8,411
Coal mining	1,113	94,074	43	52,160	13	57,477	15	1,500
Metal mining, etc	854	69,669	46	99,805	6	16,937	11	1,100
Iron and steel manufacturing	504	26,260	20	19,771	1	3,643	1	100
Lighter forms of manufacture	959	50,550	47	31,313	3	19,062	3	300
Building and construction, etc	1,494	130,532	75	81,327	8	41,627	10	1,000
Electric light and power plants, etc	214	18,943	12	21,193	5	29,873	4	400
Navigation, etc	822	79,427	30	48,364	6	29,371	9	900
Canadian Pacific Railways, etc	1,358	93,925	59	63,866	12	52,620	20	1,935
Grand Trunk Pacific Railways, etc	96	8,813	7	5,428	2	10,462	2	130
Canadian National Railways, etc	190	12,689	4	1,199	3	15,864	3	300
British Columbia Government	302	24,095	16	12,994	3	13,276	5	489
Municipalities	437	29,972	20	21,265	4	19,643	2	200
Canning or packing fish, etc	283	24,843	22	21,847	8	30,334	4	383
Explosive manufacturing, etc	8	366						
Retail employees, etc	455	32,545	17	30,911	1	7,615	1	100
Great Northern Railways, etc	31	2,653	2	1,653				
Dominion Government	43	3,328					3	300
Total	15,906	1,238,377	822	898,885	116	542,629	180	17,548

TABLE 2.—CAUSES OF ACCIDENT IN CLAIMS CLOSED DURING 1927

Cause	Temporary total disability cases		Permanent partial disability cases		Fatalities	
	Number	Amount paid	Number	Amount paid	Number	Amount paid
Prime movers	24	$2,892	4	$1,254	-------	$100
Power-driven machinery	944	76,026	171	126,798	2	12,409
Power-transmission apparatus	131	14,074	25	16,125	1	6,435
Hoisting and conveying apparatus	644	66,958	51	47,502	4	18,783
Miscellaneous machinery	45	2,592	3	1,329	-------	100
Boilers and steam- and air-pressure apparatus	46	4,120	5	3,361	-------	
Vehicles and water transportation	1,059	93,874	45	64,383	28	138,342
Explosives, electricity, fire, hot or corrosive substances	404	32,237	24	95,895	6	27,266
Falls of persons	3,303	318,253	128	176,091	15	73,087
Falling, rolling, or moving objects	4,247	392,922	218	287,762	42	206,310
Miscellaneous	5,059	234,430	148	78,386	18	77,346
Total	15,906	1,238,378	822	898,886	116	560,178

Ontario

THE report of the Workmen's Compensation Board for the Province of Ontario, covering the calendar year 1927, contains tables showing the experience of that Province and also a more detailed analysis of its operations during the year 1926. The table below summarizes some of the information contained in the report on the operations for the year 1926.

NUMBER OF ACCIDENTS AND COMPENSATION PAID, BY INDUSTRY GROUP, 1926

[Schedule 2 and crown cases not included]

Industry group	Fatal		Permanent disability		Temporary disability	
	Number of cases	Compensation	Number of cases	Compensation	Number of cases	Compensation
Lumbering	31	$40,942	257	$224,454	2,607	$141,826
Pulp and paper mills	30	121,858	108	105,603	1,527	66,819
Furniture manufacturing, etc	1	6,397	64	39,676	467	15,069
Planing mills, etc	2	7,068	118	74,269	860	42,472
Mining and explosives	33	112,332	272	193,330	1,992	119,823
Brick manufacturing, quarrying, and glass works	5	23,890	66	55,571	571	39,916
Rolling mills, etc	5	28,824	36	59,818	415	24,164
Foundries, etc	1	9,554	55	31,571	940	44,700
Fabrication structural steel, etc	3	15,005	116	70,612	1,240	53,372
Metal articles, jewelry manufacturing, etc	6	36,279	179	96,425	1,519	65,411
Agricultural implements, etc	5	11,660	154	137,361	1,384	67,947
Gas, petroleum, paint, drugs, soap, etc	4	20,572	59	34,699	724	43,794
Milling	4	17,524	26	49,415	278	17,892
Abattoirs, etc	2	13,503	23	15,118	361	12,395
Bakeries, canning, liquors, and tobacco	7	30,547	78	45,169	1,142	63,450
Tanneries, leather, and rubber goods	1	7,168	58	44,466	638	29,396
Textiles	-------	-------	60	38,740	596	19,314
Clothing, power laundries, etc	2	7,044	23	16,446	371	13,110
Printing and stationery	1	3,877	35	23,704	330	13,599
Teaming, cartage, coal and wood yards, etc	8	24,585	61	72,915	806	53,927
Road construction, etc	10	47,038	67	74,679	821	35,994
Electric power, etc	8	30,207	7	31,206	146	12,089
Steel construction, railway and canal construction, dredging, fishing, etc	27	43,023	84	91,194	1,237	81,399
Building	19	91,582	141	108,525	2,093	143,977
Total	215	750,479	2,147	1,734,966	23,155	1,221,847

Reciprocal Workmen's Compensation Agreement Between Argentina and Sweden [1]

ON MAY 14, 1928, the Argentine Minister of Foreign Affairs and the Swedish minister signed an agreement providing for the reciprocal treatment of their nationals as regards workmen's compensation for industrial accidents.

This agreement provides that citizens of one of the contracting countries suffering from an industrial accident in the other country shall have the same right to compensation which the local law concedes to its nationals. This principle applies even though the injured worker or his heirs subsequently leave the country of residence or if the heirs reside in a country other than that in which the accident took place.

[1] Asociacion del Trabajo. Boletin de Servicios, Buenos Aires, May 20, 1928, p. 221.

HOUSING

Russian Housing Policy

HOUSING policy was one of the principal subjects of discussion at the March, 1928, plenary session of the Central Council of Trade-Unions of the U. S. S. R., according to Industrial and Labor Information of May 21, 1928. The data given below are taken from that publication.

Notwithstanding the great sums devoted to housing construction since 1924—sums totaling 6,000,000 chervonetz rubles [1] by the end of 1927, there is not only no decline in the housing shortage in Russia, but the situation is becoming more acute.

The average floor space per industrial worker fell to 5.3 square meters in 1927, and there are many cases, especially in the mining, metal, and textile industries, where a worker has but 4, 3, or even only 1 square meter. As for the state of the dwellings, it is only too often beneath all criticism, according to the repeated complaints of workers' delegates at trade-union conferences and in the correspondence columns in the Trud.

In February and March of the present year inquiries were undertaken in the Donetz mining basin and the petroleum region of Baku, and the result has been to show how unhygienic, unwholesome, and harmful both to health and to industrial productivity are the conditions in which many workers are obliged to live. Damp, dirt, absence of sufficient ventilation, lack of sufficient beds (a single bed must often suffice for several workers, who sleep in it in turn), the crowding of several families into one dwelling and sometimes into a single room—these are the facts once again established by the investigators. Bad effects on the physical health (tuberculosis and venereal diseases) and on the moral health (decline of working energy) of the workers frequently follow. The housing situation has a direct bearing on the notable rise in the number of accidents to workers which has been observed in recent years, and also on the excessive labor turnover.

Furthermore, the report states that the dearth of dwellings is beginning to have a serious effect on industrial development. There are more and more cases in which an enterprise is unable to take on additional workers because of inability to provide them with housing accommodations. According to reports to the Central Council of Trade-Unions, cases of this kind have occurred in the textile, petroleum, and metal industries and coal mining. It was also declared that in numerous instances the lack of houses has also made it impossible to adopt the 7-hour day.

In the opinion of the Government authorities and trade-union circles the chief causes of the present dearth are: (a) Insufficient new buildings; (b) the ruin of houses for want of satisfactory upkeep; (c) the employment of industry for other ends of sums intended for the construction of houses; (d) the weakness of the cooperative housing societies, on which great hopes had been set.

[1] Chervonetz (10 rubles) at par=$5.146 (nominal). Exchange rate about par in 1927.

Remedial Decree

ON JANUARY 4, 1928, the Soviet Government issued a decree outlining the housing policy. Under this decree it is made the duty of the local soviets (municipalities) in the large towns to build dwellings for the workers and salaried employees in industry and in State enterprises.

In industrial areas of nonurban type, and in towns where the municipal authorities are not in a position to proceed with building operations, State industry must build houses for the workers in its employment. The railways must do the same for their workers.

With regard to the cooperative housing societies, only active societies will be allowed to enjoy the subsidies or loans granted by the Central Communal Bank. As for private building schemes carried out by individual workers, they will be permitted where neither the local authorities nor industry nor the cooperative societies are able to build the houses required. Finally, steps must be taken to offer guaranties to private capital for house construction.

In order to help municipal authorities, industry, railways, and workers' cooperative housing societies to build houses for the workers and salaried employees, the loans granted by the Central Communal Bank will be for a period of 60 years in the case of stone or concrete premises, and for 45 years in the case of wooden buildings. The rate of interest is fixed at 1 per cent per annum.

Having regard to the fact that the ruin of houses is due partly to inadequate rents, which do not permit of the maintenance of premises in good repair, and partly to negligence and vandalism on the part of occupiers, the decree provides that, as from April 1, 1928, rents must be progressively raised so as to reach by the end of 1929 a level which will enable them to cover the cost of construction, maintenance, and repair of the dwellings.

In principle, the present system of rents based on the income of the occupier is abolished. Rents are to be fixed henceforth in proportion to the value of the dwelling (state of the premises, situation, distance from center, etc.). At the same time the net rent [2] for a worker or a salaried employee may not exceed 10 per cent of his budget. The rent of houses built since 1924 may not be more than 25 per cent above the rent of a similar dwelling in premises built before the war or the revolution. Free housing in premises owned by industries (which has existed in Russia for many years) will be suppressed, and rents will be charged in the same way as for other dwellings.

In order to compel occupiers to take care of their dwellings, compulsory leases will be introduced by which the tenant will be held responsible for damage to premises which he occupies. If the occupier—even though he be a wage earner—does not fulfill his obligations, the lease may be canceled.

The decree further provides that houses belonging to municipalities or to State industry may no longer be let to persons not belonging to the class of wage earners. Leases held by such persons already living in such houses will not be renewed, and on October 1, 1929, at the latest, all tenants of this class must have left their dwellings. Leases held by wage earners shall be automatically prolonged if the occupiers have satisfactorily fulfilled their obligations.

When industry requires houses for new workers, however, persons living in houses belonging to municipalities and not working in the industry in question may be expelled; provided that when these persons belong to the class of wage earners they can be expelled only if dwellings are obtained for them elsewhere.

Attitude of Central Council of Trade-Unions

THE Government's housing policy is in the main approved by the Central Council of Trade-Unions. That body holds, however, prudence should be exercised in the matter of raising rents. In the judgment of the council it will be imperative to see that workers' rentals do not amount to over 10 per cent of their budgets. More-

[2] Excluding cost of heating, lighting, and water and possible outlay by occupiers for repayment of loans granted to them for the construction of their dwellings.

over, the unemployed and wage earners receiving 20 rubles or under per month should continue to have the facilities which hitherto have been accorded them.

It is thought that the inauguration of rent for dwellings belonging to industry which are termed "workers' barracks" will prove a difficult problem. For over 50 years such barracks have been made available to the workers without charge. In the judgment of the Central Council of Trade-Unions the wages of the workers living in these barracks will have to be increased by an amount equivalent to the rental which will be required for housing accommodations. It seems that Government industry realizes that the claim is just, but prefers to increase wages by less substantial sums. This proposed solution has met with absolute opposition on the part of the Central Council of Trade-Unions.

Furthermore, it is the opinion of the central council that all proposals for improving the housing situation will prove inadequate if building continues to be as poorly organized as it is now, if the plans which should be ready at the opening of the season (April) are not ready until three or four months later, and if building materials remain as scarce, as high priced, and as inferior in quality as at present.

It was also pointed out that new dwellings are frequently poorly built and at the end of 12 months are sometimes not fit to live in.

Better conditions are dependent upon careful organization and strict supervision. It is feared by the central council that mistakes already made will be repeated this year and that the 1928 season can only be utilized in part.

Concessions to Private Undertakings

AN ORDER of April 17, 1928, authorizes private individuals to construct large houses for rent. No restrictions are put upon the number of workers employed in such projects.

The right is accorded private individuals to organize stock companies to construct buildings "without State or cooperative participation in their capital." [3]

The term of the concession permitting private persons to construct and let premises is extended to 80 years (60 for houses of wood).[4]

Buildings erected by private persons will be exempt from all taxation during the first three years after construction, and will be subject to half the taxation rate thereafter.

The legislation fixing the scale of rents and the superficial area to be allotted to each occupant will not apply to buildings constructed by private individuals or companies. They will make their own arrangements directly with their tenants.

Save in war time, the public authorities may not impose any particular tenant on such persons or companies.

Private persons are permitted to establish industrial undertakings for the manufacture of building materials. Such undertakings will be assimilated, from the taxation point of view, to State undertakings.

Foreigners, whether companies or individuals, may have the advantage of all these provisions by means of concessions.

[3] In general, the Soviet law authorizes the creation of joint-stock companies in which the State holds 51 per cent of the shares.

[4] Hitherto, respectively, 60 and 40 years.

COOPERATION

Review of Consumers' Cooperation in 1927–28

THERE have been no very remarkable occurrences in the cooperative store movement during the past year. In the main the movement appears to be prospering in moderate degree.

More and more stress is being laid upon correct business practice and upon training courses for employees of the cooperative movement. Work along this line is being carried on by the national educational body, the Cooperative League, and the three district leagues, one for the north Central States, one for the Central States, and one for the Eastern States.

The Cooperative Central Exchange was the first to give courses for the training of persons who expected to enter or were already employed in the cooperative movement. It continued this for several years, but upon the formation of the Northern States' Cooperative League the latter took over this task, conducting a five weeks' course in 1923. Similar courses have been given each year since then, and in 1927 the Eastern States Cooperative League gave its first course of this kind. The idea has now spread to the agricultural cooperative movement, and the Farmers' Union of Nebraska announces that it will hold a training school for two weeks in October, 1928.

The Cooperative League has inaugurated and is carrying on successfully a correspondence school for cooperators, offering courses in English, arithmetic, bookkeeping, and principles of cooperation. It also has had an auditing service to which societies may subscribe, but this service has now been taken over by the Eastern States Cooperative League. A similar service has been for some years a regular part of the work of the Cooperative Central Exchange, and the healthy condition of its member societies is undoubtedly due in no small part to the work of the exchange auditing department.

One of the noteworthy developments of the past year in the attempt to raise the general level of excellence in the cooperative movement was the decision of the board of directors of the Cooperative League to issue each year a certificate of merit to those of its affiliated societies which attain a set standard of cooperative practice and business procedure. The requirements to be met are as follows:

1. That the fundamental principles of Rochdale cooperation be observed.
2. That every member society render at least semiannually a financial report to office of national or district league.
3. That every member society shall have an audit made at least once a year by an accountant acceptable to the directors of the league.
4. That every society carry on educational activities satisfactory to the directors of the league.
5. That every society in a territory where a cooperative wholesale exists shall give preference to such wholesale in its purchases.

It is planned that eventually societies will be required to meet these requirements in order to retain their membership in the league.

Central States.—The societies of the North Central States, under the leadership of the Northern States' Cooperative League, have continued their progress. The sales of the Cooperative Central Exchange, the wholesale society of the district, increased from $1,048,293 in 1926 to $1,255,676 in 1927. The sales of the Franklin Cooperative Creamery decreased somewhat, from $3,398,659 to

$3,341,740, but the combined sales of 29 societies, members of the league, showed an increase, rising from $3,341,768 in 1926 to $3,426,578 in 1927.

Seventeen stores in the iron district of Minnesota have formed the Mesaba Range Cooperative Federation, which will function as an educational body and will also make joint purchases for the member societies.

In certain other sections of the country the consumers' societies have not been so successful. This is especially true of the associations in the mining districts of Illinois, Ohio, and Pennsylvania.

The prolonged cessation of work at the mines in these districts has had its effect upon the cooperative societies, of which the miners are the mainstay. With no income except what is received in relief or in strike benefit the purchasing power of the members has almost disappeared. The cooperative stores, which of course are dependent upon the patronage of their members, can not hope to keep on indefinitely when that patronage is gone. The result has been that a number of societies have been forced to discontinue business. Others, however, are still in operation. Some of these, having extended credit to the limit of the society's margin, have been forced to cease this form of assistance to their members and have put the business on a strictly cash basis, have cut expenses to the minimum, and are in hopes of tiding over until their members are at work again.

The experience of perhaps the largest miners' society in the country, the New Cooperative Co., at Dillonvale, Ohio, is of interest in this connection. This society was started in 1908 by 30 Bohemian miners, each of whom contributed $10 toward the share capital and his labor in the construction of a small building to house the store. The first year's sales amounted to $4,000. Since that time the society has made a remarkable record of progress in this town of some 1,600 to 1,800 people. Its sales have steadily increased. The $300,000 mark was passed in 1921 and in 1925 the half million mark. (Only four other societies in the United States had sales of that much for the year.) Progress continued in 1926 when the business rose to $542,854. The paid-in capital amounted to only $30,880, but reserves had been accumulated amounting to $92,957, making the organization one of the strongest in the country.

But the miners' strike was called in April, 1927. As the months went by, the savings of the members were exhausted and the store extended credit until it was felt that this could no longer be safely done. The overhead expense was drastically cut and stocks were allowed to run low. The store is still in operation, thanks to the reserves which had been built up during the good times and to some assistance received from other cooperative societies, but the sales for the year 1927 fell to less than $372,199, and "the manager, formerly able to discount all bills, now has to ask for credit from the jobbers and wholesalers, for the first time in 15 years."[1]

Joint purchasing of such articles as tea, coffee, and sirup has been done by some of the societies in the Central States district, and plans are being made to extend this work.

Pacific coast.—Consumers' cooperation on the southern Pacific coast has never recovered entirely from the losses sustained at the time of

[1] Cooperation, New York, January, 1928, p. 13.

the failure of the Pacific Cooperative League. Individual societies are prospering, but there is no organized cooperative movement in that section. On the northern Pacific coast, however, although many of the societies were lost as the result of the failure of the National Cooperative Association, some of the ground has been recovered, largely through the efforts of the Grange Cooperative Wholesale at Seattle, and steps have been taken by the cooperative societies in the Astoria, Oreg., district, looking toward the formation of a central purchasing organization.

Eastern States.—No general report is available concerning the condition of the movement in the Northeastern States, but the data at hand indicate a fairly satisfactory state of things, especially among the societies affiliated to the Eastern States Cooperative League. These societies have their own auditing service. Beginning in 1925, with the joint purchase of several carloads of flour for two bakery associations which were members of the league, the pooling of purchases by the affiliated societies has been gradually extended, so that to-day the flour, coffee, canned goods, cereals, salt, sugar, and fruits and vegetables needed by the member organizations are being bought jointly and plans are under way for the incorporation of a cooperative wholesale society to serve them. The league is arranging for what is called "the first institute on cooperation," to be held at Brookwood College, August 19 to 25. The mornings will be devoted to study and class work and the afternoons and evenings to social times and recreation.

Statistics of societies.—The table below shows for some of the larger consumers' societies the sales and net trading gain for 1926 and 1927. As is seen, there were six societies having sales of more than half a million dollars in 1927. The students' societies of Princeton and Harvard Universities were also doubtless in this class, as their sales usually exceed this amount yearly, but no data are available for them.

SALES AND NET PROFIT OF CERTAIN OF THE LARGER CONSUMERS' COOPERATIVE SOCIETIES[1]

Society and location	Sales		Net profit	
	1926	1927	1926	1927
Franklin Cooperative Creamery Association, Minneapolis, Minn	$3,398,659	$3,341,740	$57,711	$67,499
Cooperative Central Exchange, Superior, Wis. (wholesale)	1,048,293	1,255,676	11,648	18,335
Soo Cooperative Mercantile Association, Sault Ste. Marie, Mich	590,707	602,847	38,239	39,886
Cooperative Trading Co., Waukegan, Ill	556,290	579,618	15,757	24,136
Consumers' Cooperative Services, New York City	446,915	530,156	22,347	34,611
Cloquet Cooperative Society, Cloquet, Minn	477,408	516,278	20,139	16,980
Cooperative Trading Association, Brooklyn, N. Y	391,574	428,121	16,121	11,730
Cooperative Bakeries of Brownsville, Brooklyn, N. Y	381,843	394,793	5,794	6,837
New Cooperative Co., Dillonvale, Ohio	542,854	372,199	36,583	11,216
United Cooperative Society, Maynard, Mass	332,971	338,488	11,174	12,589
United Cooperative Society, Fitchburg, Mass	324,203	332,746	12,695	10,949
Work People's Trading Co., Virginia, Minn	268,873	316,877	13,385	11,226
Crystal Falls Cooperative Society, Crystal Falls, Mich	293,438	288,776	(2)	(2)
Scandia Cooperative Association, Escanaba, Mich	281,132	279,655	(2)	(2)
Fort Bragg Cooperative Mercantile Corporation, Fort Bragg, Calif	127,002	159,454	6,869	15,568
Russian Workers' Cooperative Stores, Brooklyn, N. Y	140,000	149,784	370	3,300
Minot Cooperative Co., Minot, N. Dak	159,759	147,567	8,331	6,421
Rock Cooperative Co., Rock, Mich	132,421	144,864	12,142	12,272
United Cooperative Society, Norwood, Mass	123,286	113,741	2,191	1,371
Grange Cooperative Wholesale, Seattle, Wash	(2)	105,880	(2)	1,785
Scandia Mercantile Co., Scandia, Minn	105,131	104,278	(2)	(2)
Union Supply & Fuel Co., Staunton, Ill	129,769	100,054	4,550	2,221

[1] Data are from Cooperation (New York), March, 1928, p. 53; the Northern States' Cooperator, March, 1928; Eastern Cooperator, May, 1928; Cooperative Pyramid Builder, June, 1928; and report from Staunton Society.

[2] No data.

Housing Societies

THE past year has seen the further development or completion of several cooperative housing projects in New York City. Undoubtedly the largest of these is the cooperative community of the United Workers' Cooperative Association, with its group of apartment buildings providing living quarters for 1,185 families. The next largest project is that of the Amalgamated Clothing Workers, which has provided housing accommodations for 303 families. These projects are described on pages 1 to 14 of this issue.

Another colony is that of the Jewish Cooperative Homes Association which has provided homes for some 250 families. These tenants have established a cooperative store society and are providing themselves with groceries, meats, dairy products, fruit and vegetables, drugs, and stationery, to the amount of between $12,000 and $15,000 per month.

A fourth group is that of the Jewish National Workers' Cooperative Homes Association, whose colony includes 125 families. Cooperative purchasing is also being done by these tenants.

The Consumers' Cooperative Services started a small cafeteria in downtown New York in 1920 and has since expanded its business from year to year until now it operates seven cafeterias, two food shops, lending libraries, and a credit union. Its latest report states that the creation of a department to build cooperative houses is being considered, and the management is now working on plans for the first house.

Supreme Court Decision on Cooperative Marketing Act

THE question of the validity of cooperative marketing acts has at last come before the Supreme Court of the United States. Such laws have been the object of attack in many States but have almost invariably been upheld by the State supreme courts.[1] The provisions whose constitutionality has perhaps been most often questioned have been those providng for specific performance and liquidated damages and specifically exempting marketing associations (formed under the act) of the charge of being in restraint of trade. In the case under review (Liberty Warehouse Co. *v.* Burley Tobacco Growers' Cooperative Marketing Assn., 48 Sup. Ct. 291), which came up from the Court of Appeals of Kentucky, attack was made upon the constitutionality of two sections (26 and 27) of the cooperative marketing act of that State. The first of these provided that it should be a misdemeanor for anyone knowingly to induce breach of contract with a cooperative marketing association, and the second declared that warehousemen who knowingly permitted or encouraged the violation of such a contract should be liable to the association for $500 as well as fees and costs.

It appeared that Mike Kielman joined the cooperative association and signed its contract, binding himself to deliver to it all tobacco raised by him. Notwithstanding, he delivered 2,000 pounds of his

[1] Decisions of the State supreme courts in some of these cases have been noted in the Labor Review as follows: California (December, 1922, p. 237), Colorado (May, 1926, pp. 106, 107), Florida (September, 1927, pp. 76, 77), Louisiana (May, 1926, pp. 108, 109), Mississippi (May, 1926, pp. 107, 108), North Carolina (September, 1924, pp. 167–169), Oklahoma (May, 1926, p. 109), Oregon (May, 1923, pp. 230, 231), Tennessee (April, 1925, pp. 174, 175), Texas (February, 1924, p. 218), Washington (September, 1924, p. 169), and Wisconsin (September, 1924, pp. 166, 167).

crop to the Liberty Warehouse Co. Before the warehouse company could dispose of it, the association notified the company of the circumstances, requested it not to sell the tobacco, and called attention to the penalties prescribed in the law. The company ignored this warning and proceeded to sell the produce at auction, whereupon the cooperative association brought suit, in which it was sustained by the lower court and by the court of appeals, the association being awarded judgment for $500 and $100 attorneys' fees.

The Supreme Court found no abuse of power by the lower courts depriving the company of any of its lawful rights, and pointed out that it had no jurisdiction to review a mere declaratory judgment of those courts as to the rights and duties of the company under the law.

As to the company's contention in regard to sections 26 and 27 that they abridged the company's privileges as a citizen, conflicted with the fourteenth amendment, deprived it of property without due process of law, and denied it equal protection of the laws, the court pointed out that a corporation does not possess the same rights as a citizen. It denied that mere authorization by the State of the formation of marketing associations impaired any right of a warehouse company. "This also is true of the declaration that such associations shall not be deemed monopolies, combinations, or conspiracies in restraint of trade, and that contracts with members shall not be illegal. The State may declare its own policy as to such matters."

The court declared that the company had no substantial basis upon which to invoke the equal protection clause, since the act did not prescribe any more rigorous penalties for warehousemen than for other offenders. As to the company's contention that the act abridges the company's right to do business with anyone who seeks its services, the court said:

> Undoubtedly the statute does prohibit and penalize action not theretofore so restricted and to that extent interferes with freedom. But this is done to protect certain contracts which the legislature deemed of great importance to the public and peculiarly subject to invasion. We need not determine whether the liberty protected by the Constitution includes the right to induce a breach of contract between others for the aggrandizement of the intermeddler—to violate the nice sense of right which honorable traders ought to observe.

The court pointed out that similar statutes have been enacted in 42 States and by Congress, and that, with a single exception, no court has condemned any essential feature of such an act, and concluded as follows:

> The opinion generally accepted—and upon reasonable grounds we think—is that the cooperative marketing statutes promote the common interest. The provisions for protecting the fundamental contracts against interference by outsiders are essential to the plan. This court has recognized as permissible some discrimination intended to encourage agriculture. [Cases cited.] And in many cases it has affirmed the general power of the States so to legislate as to meet a definitely threatened evil. [Cases cited.] Viewing all the circumstances, it is impossible for us to say that the Legislature of Kentucky could not treat marketing contracts between the association and its members as of a separate class, provide against probable interference therewith, and to that extent limit the sometime action of warehousemen.
>
> The liberty of contract guaranteed by the Constitution is freedom from arbitrary restraint—not immunity from reasonable regulation to safeguard the public interest. The question is whether the restrictions of the statute have reasonable relation to a proper purpose. [Citing cases.] A provision for a penalty to be received by the aggrieved party as punishment for the violation of a statute does not invalidate it. [Citing cases.]
>
> Affirmed.

Membership of Agricultural Cooperative Associations

A REPORT recently published by the United States Bureau of Agricultural Economics [1] gives detailed membership figures for the various types of cooperative marketing associations, from which the following data were taken.

The report covers 10,803 associations, whose membership at the close of 1925 aggregated 2,700,000. It is stated that approximately 50 per cent of these associations are engaged also in the cooperative purchase of such things as farm supplies, general merchandise, fuel, hardware, etc.

The following table, taken from the report, shows the membership distribution by States:

NUMBER AND PER CENT OF TOTAL MEMBERSHIP OF AGRICULTURAL COOPERATIVE ASSOCIATIONS, BY STATES, 1925

State	Number of associations	Estimated membership		State	Number of associations	Estimated membership	
		Number of members	Per cent			Number of members	Per cent
Minnesota	1,383	217,400	8.1	Ohio	395	115,300	4.3
Kentucky	56	194,700	7.2	New York	286	100,000	3.7
Iowa	1,094	179,800	6.7	Oklahoma	143	92,200	3.4
Missouri	537	170,600	6.3	California	350	91,200	3.4
North Carolina	50	139,900	5.2	All others	4,159	1,019,500	37.8
Illinois	822	131,000	4.8				
Michigan	436	128,300	4.7	Total	10,803	2,700,000	100.0
Wisconsin	1,092	120,100	4.4				

Consumers' Cooperation in Canada

THE Canadian Cooperator (Brantford, Ont.) for July, 1928, contains data, covering the year 1927, for the United Grain Growers and 24 other cooperative societies affiliated to the Canadian Cooperative Union. Groceries are the articles most commonly handled by these societies, but most of them also sell shoes and dry goods, and some societies sell various kinds of farm supplies as well.

The table below, compiled from this report and that of the previous year, shows the development of these societies in 1926 and 1927:

OPERATIONS OF CANADIAN COOPERATIVE SOCIETIES, 1926 AND 1927

Item	Retail societies		United Grain Growers	
	1926	1927	1926	1927
Number of societies reporting	16	24	1	1
Membership	7,308	8,914	35,441	35,000
Share capital	$354,971	$488,298	$2,890,628	$2,979,078
Loan capital	$157,838	$184,530		
Reserves	$151,791	$228,504	$1,203,182	$3,500,000
Amount of business	$2,792,872	$4,481,575	*$2,701,943	*$2,312,218
Net profit	$154,140	$283,777	$418,574	$720,266
Amount returned in patronage dividends	$118,945	$227,734		
Number of employees	208	280	750	750

* Distributive departments only; figures for other items apply to all departments.

[1] United States. Department of Agriculture. Technical Bulletin No. 40: Agricultural cooperative associations, marketing and purchasing, 1925, by R. H. Elsworth. Washington, 1928. Data on volume of business, taken from this report were given in the Labor Review for April, 1928, pp. 86, 87.

The period in which these societies have been in operation ranges from 1 year and 2 months to 21 years and 6 months; their average age is 10 years and 6 months.

The rate of interest paid on capital ranged from 5 to 8 per cent, and the rate of patronage dividend ranged from 1 to 11 per cent. It is pointed out that were the rate of return figured on capital invested, instead of on sales, this would mean that these societies had in 1927 made returns to their members of 58.12 per cent on the invested capital.

A number of these societies are making some of their purchases from the English Cooperative Wholesale Society. In 1927 these amounted to $23,500.

OLD-AGE AND OTHER PENSIONS

Old-Age Pension Act of Massachusetts

A SPECIAL commission of five members to investigate the subject of old-age and other pensions was provided for by the Massachusetts Legislature in 1923 (ch. 43). Additional matters were referred to it in 1924 (chs. 33, 35, and 44) and its time for reporting on old-age pensions was extended in 1925 to November 1, 1925. The conclusions and recommendations embodied in its report were agreed to by three members, the other two filing a minority report containing their separate conclusions and recommendations. The majority report recommended that a system of old-age pensions be established, to be supported and administered by the State. The minority report favored improvement of indoor relief and the administration of poor relief by the township, which should receive one-third of the cost from the State. Each report submitted a draft of a bill which embodied the recommendations made. Section 6 of the draft contained in the minority report provided that the treasurer of the Commonwealth be authorized to hold funds received, either from gifts or bequests, for the purpose of establishing a fund for the assistance of aged persons suffering from incurable diseases and other aged persons in need of assistance.

On June 12, 1928, the first Massachusetts law attempting to provide a solution of the problem of old age was approved. (Acts of 1928, ch. 383.) Generally, it was limited to the suggestion contained in section 6 of the draft of the minority mentioned above.

The act provides for the creation of a public bequest commission consisting of the State secretary, the State treasurer, and the commissioner of State aid and pensions. No additional compensation shall be allowed the officials for their service on the commission. A "public bequest fund" was provided for and shall be under the control of the commissioners. It is to be made up of gifts to the fund or to the commission for the use of the fund. (No State contribution was provided for.) The State treasurer shall be the custodian of the fund. When, and so long as, the principal of said fund amounts to $500,000 the commission, with the approval of the governor and council, may distribute, in accordance with its rules and regulations relative thereto, the income from said fund to such worthy citizens of the Commonwealth, as, in its opinion, by reason of old age and need, are entitled thereto. No man under 65 and no woman under 60 is entitled to assistance from such fund. The commission, subject to the approval of the governor and council, may make, and from time to time may alter and amend, rules and regulations governing payments.

Old-Age Pensions in Canada

THE Canadian Labor Gazette of April, 1928, reports that the old-age pensions act has now become operative in Yukon Territory under an agreement concluded in March with the General Government, in accordance with a resolution adopted last year by the Yukon Council. The legislatures of Saskatchewan and Manitoba have also enacted legislation which, when the necessary arrangements with the General Government have been concluded, will bring the Federal act into effect within these Provinces, and it is hoped that the payment of pensions will shortly begin. British Columbia adopted the plan last year, and it is already in operation there.

The Canadian plan establishes pensions for persons 70 years old and upward whose income from other sources is less than $365 a year. The maximum pension payable is $240 a year, and this is diminished by the amount of the recipient's own income, so far as this exceeds $125 a year. One-half of the amount of pension payable is borne by the Federal Government and the other by the government of any Province which enacts legislation giving effect to the system. The cost of administration is borne by the provincial government.

Under date of May 28, 1928, the Canadian Deputy Minister of Labor presented to the House of Commons a report upon the agreements, made in accordance with the terms of the old-age pensions act, between the Dominion Government and the governments of the Provinces of British Columbia and Saskatchewan, and included with it a statement of the operation of the plan in British Columbia.

British Columbia was the first Province to take advantage of the act, and on September 28, 1927, the Dominion Government signed the pensions agreement with that Province. It has since paid over to it $131,452, which is half of the total amount the Province paid in pensions from September, 1927, to March 31, 1928. In May, 1928, a similar agreement was entered into with the Province of Saskatchewan, but as yet the Dominion Government has not been called upon to make its quarterly payment to this Province.

The number of old-age pensioners in British Columbia is given as 2,712, which is 0.4716 per cent of the total population, and 22.6 per cent of the population aged 70 and over. The average monthly pension is $17.43, and the total net amount paid in pensions up to March 31, 1928, was $262,904. Among the pensioners, 1,579 were men and 1,133 were women. Nine-tenths of those receiving pensions had been born either in Canada or in Great Britain, the percentages being 43.6 for Canada, 32 for England, 9.9 for Scotland, and 4.7 for Ireland. The pensioners owned property to the value of $1,268,938, or, on the average, $467.90 per capita.

Mothers' Pensions in Saskatchewan

A RECENT report of the commissioner for the bureau of child protection in Saskatchewan, concerning mothers' pensions, is summarized in the Canadian Labor Gazette for April, 1928. During 1927 the bureau received 260 new applications for the mothers' allowance, of which number 238 were not allowed. There were 188

cancellations during the year, and at the end of December the number of allowances in effect was 1,253. This represents the growth of the system from 1918 to 1927, inclusive.

The amount paid during the calendar year totaled $343,975, which represented an average of $22.88 per family per month, and the total number of children under 16 years of age represented in the families receiving allowances was 4,386. * * * On December 31, 217 women whose husbands are incapacitated for earning for the family and are either in an institution or at home were receiving allowances. There were 12 cases where orphans were being taken care of by widows or unmarried women, and 17 cases where the husband or father was in jail or penitentiary.

In all, there were 48 fewer applications for allowances received in 1927 than in 1926 and eight more applications allowed. The number of cancellations in 1927 was 80 less than in 1926, and the number receiving allowances now is 134 more than at the same period last year. A total of $18,545 more was paid out in 1927 than in 1926.

Pension System for English Hospital Officers and Nurses[1]

A GENERAL pension system for hospital executives and employees was put into effect January 1, 1928, in the voluntary hospitals of England and Northern Ireland.

There are two types of hospitals in England—voluntary and State—the former type being the more important. The State hospitals are connected with the local poorhouses and their officers and nurses participate in pension schemes controlled by the local authorities. The voluntary hospitals, on the other hand, are maintained by voluntary contributions from the public, are staffed by physicians and surgeons who give their services, and are managed by boards whose members do not receive fees. There is intense local pride in them, especially outside of London, and as a result there is general objection to any tendency toward Government interference or toward centralization of authority. There was considerable opposition, therefore, to a general pension scheme, but one was finally organized in London through the efforts of King Edwards Hospital Fund—a fund constituted to make central collections on behalf of London hospitals—and other hospital and nursing organizations.

The plan includes all the members of the administrative, clerical, and dispensing staff of the institutions who elect to come under the pension scheme and whose annual salary is $800 or over, although those earning between $500 and $800 are given the privilege of joining should they wish to do so. Hospital officers and nurses retain their right to the pension in case of transfer to another institution and, in the case of nurses, also if they take up private nursing. Hospital officers who give up the service before completing 10 years of service and nurses who give up practice before that time may not retain their pension rights. Each hospital may decide for itself whether or not it will admit students to the pension scheme. If the hospital does admit them their contributions are allowed to accumulate at interest but no policy is taken out until training is completed.

The principle of joint contributions based on the salary of those participating is followed in the pension scheme, the employing

[1] Hospital Management, Chicago, May, 1928, pp. 31-34: "Pension system put into effect by English hospitals and nursing groups," by Sir. Edward Penton.

institutions paying 10 per cent and the subscribers to the pension system 5 per cent. The insurance is carried by regular insurance companies, as it was felt that the resources of the hospitals were not sufficient to justify the risk of carrying the insurance in a mutual fund.

The pensions are payable either in the form of an endowment policy or in a deferred annuity policy. The policies mature at the age of 60 for men and at the age of 55 for women, but retirement is not compulsory at these ages and in case retirement is deferred the amount of the policy is allowed to accumulate at compound interest.

The scope of the insurance scheme is shown by the fact that there are 948 voluntary hospitals in Great Britain and Northern Ireland comprising approximately 63,000 beds and 50,000 nurses in hospital service or private practice.

Widows', Orphans', and Old-Age Contributory Pensions in Scotland

THE ninth annual report of the Scottish Board of Health, recently issued, calls attention to the widespread effect of the widows', orphans', and old-age contributory pensions act upon the economic position of the people of Scotland.

At the date of writing the number of persons in respect of whom weekly payments are being made under the scheme, including children for whom additional allowances are payable while they remain of the required age, is estimated at over 150,000. In other words, 3 persons out of every 100 of the population and one person for every 12 insured persons are beneficiaries under a scheme that has been operative for little more than two years.

The success of the plan, the report points out, is largely due to the fact that it is contributory. The independence of the Scottish people renders them averse to the acceptance of charity, but the contributory nature of the scheme removes it, in their opinion, from the category of philanthropic undertakings, and they adjust their plans for life with both the payment of contributions and the eventual receipt of pensions as fundamental factors.

A large part of the work in 1927 consisted of preparations for the coming into effect, on January 2, 1928, of the provisions concerning pensions for those aged 65 to 70. By the end of December, 60,948 claims for such pensions had been received, of which 45,097 had been approved, 5,826 had been disallowed, 1,707 otherwise disposed of, and 8,318 were still under consideration.

More than two-thirds (68 per cent) of the claims which were disallowed had been made in good faith under a misapprehension of the provisions of the act concerning a wife's claim to a pension through the insurance of her husband. An uninsured woman between the ages of 65 and 70 may claim a pension if her husband is or has been entitled to a pension between these ages by virtue of his own insurance. If, however, the husband had died or had reached the age of 70 before January 2, 1928, the woman has no claim to a pension during this age period. "It was through a fairly common failure to appreciate this that most of the disallowed claims were made."

Data as to the financial working of the scheme show that for the year ending March 31, 1928, the expenditure (partly estimated) for

pensions was £1,252,300,[1] of which £903,200 was for widows' and £49,500 for orphans' pensions, while £299,600 was for pensions at ages 65 to 70. Of the pensions for widows and orphans the greater part, £605,800, was paid under the noncontributory provisions.

Attempts at fraud seem to have been rare. During the year overpayments to the amount of £1,320 were made. Most of these had been claimed under a misapprehension as to when the right to a pension had lapsed, and when the mistake was discovered were easily recovered. Of the total overpayments, only £144 had to be written off as irrecoverable, and of this amount less than half (£50) was found to have been overdrawn with fraudulent intent. In 12 instances prosecutions were instituted, resulting in 9 convictions, with 3 cases still unsettled when the report was prepared.

Proposed Old-Age Pensions in South Africa

THE Government of the Union of South Africa has announced its decision to establish a noncontributory old-age pension scheme, to become effective in January, 1929. The details of the plan are not at hand, but the Social and Industrial Review, the official publication of the Department of Labor of South Africa, gives in its issue for May, 1928, some of the principal features of the proposed system, as follows:

> The intention is to grant old-age pensions to persons of small means who have reached the age of 65 years. The pension for Europeans will be £30 per annum and for colored persons (not including natives) £18 per annum, the means limit being £54 and £36, respectively. If the income is below £24 and £18, respectively, full pension will be paid, and as the means increase to £51 and £33, respectively, the pension will be reduced pari passu.
>
> On the basis of the proposals it is estimated that the cost of the scheme for the first full year will not exceed £780,000. The cost will increase annually by about one-half per cent.

[1] Pound at par=$4.8665; exchange rate for March, 1928=$4.8799.

RELIEF OF UNEMPLOYMENT

Increased Unemployment Insurance Contributions in Queensland

UNDER date of April 28, 1928, the Governor of Queensland published an amended regulation, effective from July 1, changing the rates of contribution to the unemployment insurance fund. In the past the Government, the employer, and the employee have each contributed weekly 4d. to the fund, but from that date the amount is to be 6d. each. The Queensland Industrial Gazette, which publishes the announcement in its issue for May 24, 1928, gives also a summary of an explanation regarding the change made by the Minister for Labor and Industry, who stated that it has been rendered necessary by the heavy demands upon the fund due to the prevalence of unemployment.

Mr. Gledson said that the council at its last two or three meetings had been greatly concerned at the rapid depletion of the fund. The council had gone very fully into the matter, and could see no way of saving expense so far as the payments were concerned. In view of the large number of unemployed persons and the heavy drain on the fund, the council would find it necessary to further increase the sustenance contribution by the three parties contributing to the fund—the Government, the employer, and the employee.

According to reports from labor exchanges throughout Queensland, about 11,000 persons were unemployed in Queensland at the middle of March.

Compulsory Registration of Unemployed in Italy

ON MARCH 29, 1928, a royal decree was issued in Italy governing the establishment and operation of employment exchanges.[1]

Under this decree employers are forbidden to engage unemployed workers not registered at employment exchanges and the workers must not accept work without being registered.

An unemployed worker must register, in the district in which he resides, at the employment exchange having jurisdiction over the particular type of work he desires. Failure so to register is punishable by a fine up to 200 lire.[2] Five days after employment is secured he must report the fact to the employment exchange at which he is registered, the maximum fine for violation of this rule being 50 lire. For accepting work without having previously registered at an employment exchange, he may be fined up to 300 lire.

Employers are given the privilege of selecting workers from lists of the unemployed but preference must be given to members of the National Fascist Party and of the Fascist trade-unions. This regu-

[1] The provisions of the decree as given in this article are from a translation of the decree furnished by Henry P. Fletcher, American Ambassador to Italy, under date of May 29, 1928.

[2] Lira at par = 5.26 cents; exchange rate for May, 1928 = 5.27 cents.

lation is applicable also to the employment of manual laborers by public organizations, though exclusive of the personnel which is in any way dependent upon State administrations, even though such organizations may have an autonomous character.

An employer who engages workers not registered at employment exchanges, or who accepts the services of an intermediary to secure workers, may be fined 50 to 300 lire for each worker so employed, the total of such fines not to exceed 3,000 lire.

An employer (unless connected with the State administration) must report, within five days, the engagement of an unemployed person to the employment exchange at which the worker was registered, and indicate the nature of the work for which he was hired. Also, within five days, such an employer must report to the employment exchange at which they were registered the names of workers whom he has dismissed or who have resigned, stating the kind of work performed and the length of their service. An employer who fails to report engagements and dismissals is punishable by a fine of 30 to 100 lire, for each workman employed, with a maximum of 2,000 lire, and of 50 to 200 lire, for each worker dismissed, with a maximum of 4,000 lire.

Mediation by private individuals, associations, or companies to bring about the employment of the unemployed, even though no charge is made for such services, may be forbidden in determined localities and also in the country as a whole by decree of the Minister for Corporations in agreement with the Minister for National Economy. Any person acting as an intermediary in violation of the law may be fined up to a maximum of 5,000 lire. A maximum prison sentence of a month may be added to the fine in the more serious cases, if the same offense is repeated, or if the intermediary received remuneration for his services.

Separate employment exchanges for different classes of workers are to be set up at the offices of the workers' trade associations, each exchange to be established by a separate decree issued by the Minister for Corporations, in agreement with the Minister for National Economy and the interested corporations where such exist. The decree must specify the territorial jurisdiction, the occupations, and the kind of product to be covered by the exchange. Each exchange is to be administered by a commission composed of members appointed in equal numbers (fixed by the decree) by the interested associations of employers and of workers and approved by any competent existing corporations. The presiding officer is to be the secretary (presumably the local secretary) of the National Fascist Party.

These commissions will direct and control the functioning of their respective exchanges in accordance with prescribed ministerial rules and rules laid down by the labor and social insurance section of the competent provincial economic council. They shall also furnish to the competent ministers opinions on questions concerning the labor market.

The agents of the employment exchanges shall be selected by the commissions from candidates proposed by the interested workers from directors of their trade organizations, such agents to be responsible to the commissions appointing them.

In each Province the labor and social insurance section of the provincial economic council, in addition to other duties assigned by law, will control and coordinate the work of the employment exchanges. This section will establish, within the limits of the ministerial regulations, compulsory rules regarding the organization, functions, and mutual relations of the bureaus, and will decide appeals relative to the activities of the employment exchanges.

The labor and social insurance section of a provincial economic council shall be presided over by a delegate from the Ministry for Corporations and be composed of (a) an equal number of representatives of the interested trade organizations of employers (selected from the members of the other sections of the provincial economic council) and of workers; (b) the industrial and labor inspector; (c) the director of the Institute of Social Insurance; and (d) the purveyor of public works or a functionary appointed by him, or, in Provinces not having a purveyor of public works, of the chief civil engineer. The members listed in (b), (c), and (d) are advisory only and will not have the right to influence decisions.

In case of the irregular functioning of employment exchanges, the Minister for Corporations, in agreement with the Minister for National Economy, and after consultation with the labor and social insurance section of the competent provincial economic council, may dissolve the administrative commission and appoint a commissioner.

In the execution of the decree regarding the employment exchanges the Minister for Corporations and the Minister for National Economy have supervision over such matters as come within their respective jurisdictions.

LABOR LAWS

Bills and Legislation of Interest to Labor in First Session of Seventieth Congress (1927–28)

CONGRESS has exclusive legislative power over the District of Columbia. Labor legislation of the same general nature as that introduced in State legislatures is introduced in Congress for the District of Columbia. Congress also has the power to pass labor legislation affecting persons engaged in interstate and foreign commerce (such as railroad employees, seamen, and maritime workers), and persons employed by the Government or engaged on the public works of the United States or within places (such as navy yards) subject to the exclusive jurisdiction of the Federal Government. Through its power to "constitute tribunals inferior to the Supreme Court" Congress may regulate the action of United States courts in labor cases.

Under the above-mentioned powers a large number of bills affecting labor are introduced at each session of Congress. Most of these are serious attempts at the immediate solution of some problem of interest to labor. Some, however, are introduced at the request of some individual or group, while others are introduced as a foundation for future action. Bills upon which hearings are held are usually those in which the public interest has been aroused. Legislation of some kind very often follows these hearings. However, the bills must be reported out of committee, be passed by both houses, and in most cases signed by the President before they become law.

In the present article the bills of interest to labor generally, to employees engaged on public works of the United States, and to employees of the United States are necessarily very briefly treated. The article does, however, show the type of labor legislation Congress is most interested in at the present time. The amount of interest in a given subject may be fairly determined by the number of bills relating to it or the amount and type of action taken on the bills introduced. The article also shows, negatively, that the interest of the national legislators on some subjects is not great enough to warrant the introduction of a bill on the subject. In the absence of a statement that a particular bill has been reported out of committee, it may be understood that the bill had not advanced to that stage at the close of the session.

Convict Labor

TEN bills were introduced on the subject of convict labor. The one which received the greatest attention was the so-called Cooper-Hawes bill (S. 1940; H. R. 7729; also S. 1792, S. 823, and H. R. 6044). This bill divests convict-made goods of their interstate character, so that the laws of the States into which such goods have been shipped may be applicable to them to the same extent as to

goods produced within the State. Many States have laws requiring persons dealing in convict-made goods to obtain licenses or providing that the goods must be so marked as to indicate that they were convict made. Such laws are now ineffective as to goods shipped into the State, as they are considered an unlawful burden on interstate commerce. The Cooper-Hawes bill seeks to remedy this situation. A precedent may be found in the liquor act of August 8, 1890 (26 Stat. 313), known as the Wilson Act, which was held constitutional by the United States Supreme Court in the case of In re Rahrer, 140 U. S. 545. The only new problem presented is whether a distinction will be made between liquor and convict-made goods.

Hearings were held on the Cooper-Hawes bill, and it was favorably reported to both Houses with the recommendation that it be passed. (S. Rept. No. 344; H. Rept. No. 897.) The bill passed the House of Representatives on May 15, 1928, but was not voted on in the Senate, probably because of the rush during the closing days of the session. It may, however, receive attention during the coming session.

House bill 9500 contains the same provision as the Cooper-Hawes bill, with the additional requirement that all convict-made goods moving in interstate commerce be marked "made with prison labor." Senate bill 1174 would make it unlawful to ship convict-made goods in interstate commerce unless the packages in which the goods are packed be labeled so as to indicate that convicts were employed in their production. The reporting of the Cooper-Hawes bill makes further consideration of these two bills unlikely.

Senate bill 829 is a bill to amend the act of February 11, 1924 (43 Stat. 6), passed for the purpose of equipping the United States Penitentiary at Leavenworth for the manufacture of supplies for the use of the Government. The amendment would do away with the authorization to sell the shoes manufactured at any penitentiary for the use of the Coast Guard, military or naval forces of the United States. The bill was not reported.

Senate bill 4494 and House bill 11285 provide for the establishment of Federal prison camps for the use of convicts working on roads and other public improvements. The bill was favorably reported to the House (H. Rept. No. 1735) and was passed by it on May 21, 1928. The Senate bill was not reported out of committee.

Two resolutions were introduced providing for investigations concerning Federal prisoners. One of these (H. Con. Res. 27), for the investigation of further employment for Federal prisoners, was not acted upon. The other (H. Res. 233) was for the purpose of investigating the care of Federal prisoners, including work done by them. This resolution was agreed to and an investigation is now being carried on.

Contract Labor

A JOINT resolution (H. J. Res. 312) was introduced relating to the enforcement of the contract-labor provisions in the immigration act of 1917. The word "artists" when applied to instrumental musicians would be limited to musicians of distinguished merit and ability. The resolution apparently was not acted upon.

Wages and Hours of Labor

THE wages and hours of labor of seamen were the subject of several bills (H. R. 14129, H. R. 9490, H. R. 9491, and S. 2945). Senate bill 2945, introduced by Mr. La Follette, was passed by the Senate April 24, 1928. It extends to seamen on foreign vessels outside the United States the provisions of the act concerning payments of advance wages.

Two bills (H. R. 218 and S. J. Res. 25) would declare November 11 a legal public holiday. The latter was reported adversely on April 4, 1928. House bill 78 would make Sunday a day of rest in the District of Columbia, and Senate bill 3980 provides for a six-day week for railroad employees. Neither was reported out of committee.

Safety and Health

Child Labor

THE child labor law of 1908 for the District of Columbia (35 Stat. 420) was superseded by a new act, Public No. 618, approved by the President on May 29, 1928. The new act, effective July 1, 1928, prohibits the employment of children under 14 years of age in connection with any gainful occupation. [1]

Child Welfare

A bill (H. R. 11986) to create a Federal Child Relief Board to administer relief to children in distress during prolonged strikes, children of the unemployed, and others was introduced but not acted upon.

Negro Welfare

A bill to create a Negro Industrial Commission to study economic conditions and labor problems of the Negro (H. R. 63) was not reported out of committee.

Safety

Two bills provided for the creation, in the Bureau of Labor Statistics of the United States Department of Labor, of a division of safety for the purpose of gathering statistics of industrial accidents. These bills were favorably reported to both Houses, but were never voted on. (S. 1266, Rept. No. 347; H. R. 6848, Rept. No. 745.)

Several bills provided for the establishment of mine rescue stations but were never reported out of committee. (H. R. 5651, H. R. 5811, H. R. 6484, H. R. 7945, H. R. 9680, H. R. 9681, and H. R. 10361.) A bill providing for a plant suitable for the investigations of the Bureau of Mines (H. R. 12992) also was not reported.

Four bills were introduced looking toward the safety of employees and travelers upon railroads (H. R. 9950 and H. R. 7460; S. 669 and S. 2320). Two bills were aimed at the practice of using stop watches, one in the War Department (H. R. 7754) and the other in the Postal Service (H. R. 7473). Two bills to reduce the hazards in the use of spray-painting machines were introduced, one of which prohibited

[1] For further analysis, see Labor Review, July, 1928, p. 66; also H. R. 6685, Rept. No. 842.

the use of the machine (S. 3966) and the other regulated its use (S. 4186). None of the above bills was reported out of committee.

Housing

TWO bills were introduced to encourage home ownership by providing capital at lower rates of interest (S. 817 and H. R. 11997). Neither was reported out of committee.

Labor Activities

Coal Miners' Strike

THE coal-mining industry and the strike of the bituminous coal miners received considerable attention. Three resolutions (H. Res. 76 and 109, and S. Res. 105) called for an investigation of conditions in the coal fields. The last resolution was passed by the Senate and a committee made an investigation.

Bills were also introduced to promote consolidation and cooperation in the mining and marketing of bituminous coal (H. R. 8523, H. R. 12105, and S. 2029), providing for Government operation of the mines (H. R. 8321, and H. J. Res. 100), to control the marketing of coal (S. 800, and H. R. 92), and to settle labor disputes (S. 800, S. 676, H. R. 262, H. R. 397, and H. R. 6671). None of these bills was reported out of committee. The bill which was apparently most carefully prepared was introduced by the chairman of the Senate Committee on Interstate Commerce within less than a month of adjournment. (S. 4490; H. R. 13880.) The purpose of the bill was "to regulate interstate and foreign commerce in bituminous coal; to provide for consolidations, mergers, and cooperative marketing; regulate the fuel supply of interstate carriers; require the licensing of corporations producing and shipping coal in interstate commerce; and to create a Bituminous Coal Commission." It was not reported out of committee.

Injunctions

The Shipstead bill (S. 1482; H. R. 7759), which was aimed at the granting of injunctions in labor disputes, provided that equity courts of the United States should have jurisdiction to protect tangible and transferable property when there was no remedy at law. Hearings on this bill received considerable public attention. A substitute bill was reported by a subcommittee to the Senate Committee on Judiciary, but was not reported to the Senate. Another bill (H. R. 10082) prohibited the issuance of injunctions in certain labor disputes, but was not reported out of committee.

Miscellaneous

Bills to prohibit picketing in the District of Columbia (H. R. 112), making interference with interstate commerce unlawful (H. R. 114), providing for jury trials in certain contempt proceedings (H. R. 99, S. 849, S. 4202), protecting the right of freedom of speech (H. R. 10862, H. R. 12485) and concerning private or industrial detectives (S. Res. 46, H. R. 8125) were not reported out of committee.

Unemployment

SEVERAL resolutions were introduced to investigate the unemployment situation and to consider methods of relief (S. Con. Res. 16, S. Res. 147, S. Res. 219, S. Res. 233, H. J. Res. 289, H. J. Res. 290, and H. J. Res. 326). Senate Resolution 147, directing the Secretary of Labor to make an investigation, was passed, and the Secretary of Labor made a report on March 24. Senate Resolution 219, directing the Senate Committee on Education and Labor to make an investigation concerning the causes of unemployment and certain suggested plans of relief, also passed.

A bill requiring the Bureau of Labor Statistics to collect employment statistics was introduced but not reported (S. 4158). There has, however, been added to the Budget $100,000 for the Bureau of Labor Statistics.

The Jones prosperity reserve bill (S. 2475; H. R. 13568), seeking a solution of the unemployment problem by providing for the expansion of public works during periods of unemployment and industrial depression, was reported out of committee (S. Rept. No. 836) but did not reach a vote. The House bill was not reported.

A bill more detailed than the Jones bill (S. 4307) offered the same solution. House Resolution 119 was limited to the present unemployment situation and provided for the speeding up of public works plans. House bill 12288 provided for the issuance of legal tender notes, in exchange for noninterest-bearing bonds, to relieve the unemployment situation. None of the above bills was reported out of committee.

Two bills were introduced for the purpose of establishing a national employment system (S. 4157; H. R. 13901). Neither was reported out of committee.

Social Insurance

Workmen's Compensation

FOR several years bills have been introduced for the purpose of giving the employees of the District of Columbia the benefits of a workmen's compensation act, and a number of such were introduced in the seventieth congress (H. R. 200, H. R. 131, H. R. 5711, S. 1653, and S. 2025). A difference of opinion concerning the advisability of creating an exclusive State Fund arose, however, which, it appeared, might prevent the passage of an act on this subject. Those interested in the legislation, however, agreed on a bill extending the provisions of the longshoremen's and harbor workers' compensation act to employees in the District of Columbia (S. 3565, S. Rept. No. 852; and H. Rept. No. 1422; H. R. 12896, Rept. No. 1357). The bill, which did not provide for an exclusive State fund, was approved by the President on May 17, 1928 (Public No. 419, 70th Cong.), and became effective July 1, 1928.

Another bill provided for extending the provisions of the longshoremen's and harbor workers' act to employees engaged in interstate air commerce (H. R. 13782), but was not reported out of committee.

The first amendment to the longshoremen's and harbor workers' compensation act made it the duty of United States District Attor-

neys to represent the United States Employees' Compensation Commission. This amendment was approved by the President on May 4, 1928. (H. R. 12320, Rept. No. 1070, Public Act No. 349.)

Employers' Liability

Longshoremen have been covered by a workmen's compensation act. In the case of injury S. 4452 would give them the right to sue for damages. Another bill (S. 3813) extended jurisdiction of United States courts to cover personal-injury suits by employees of foreign vessels. Neither of the two bills was reported out of committee.

Old-Age Pensions

A resolution was introduced providing for an investigation of old-age dependency in the United States and methods of relief (H. J. Res. 278). Two bills provided for pensions direct from the United States Government (H. R. 13667, for Indians only; and H. R. 11474), and two others provided for old-age pensions in cooperation with the States (H. R. 6511; H. R. 13616). None of these bills was reported out of committee.

Unemployment Insurance

A bill was introduced for the purpose of creating a compulsory unemployment insurance system (H. R. 12205) but was not reported out of committee.

Education

Vocational Education

TWO bills (S. 1731 and H. R. 12241) were introduced for the purpose of more complete development of vocational education in the several States. The Senate bill passed, was sent to the House, and there reported upon (H. Rept. No. 1667) but did not come to a vote. (See also H. R. 12241, Rept. No. 1097.) A bill to amend the vocational education act of 1917 was also introduced (H. R. 12691) but was not reported out of committee.

Vocational Rehabilitation

The House of Representatives passed a bill to provide for the vocational rehabilitation of disabled residents of the District of Columbia (H. R. 13251, Rept. No. 1578), but the bill was not reported out of committee in the Senate. (See also H. R. 11027.)

Industrial Schools

A bill to create a national board of rural industrial schools for mountain children was introduced (H. R. 5705) but was not reported out of committee.

Government Contract Work

THREE bills affecting labor on public works of the United States were introduced during the past session. Of these, House bill 5767 is probably the most important, as it is an attempt to establish uniform requirements affecting Government contracts. It contains provisions securing payments to persons supplying labor and mate-

rials, setting the hours of labor, and providing for preference to domestic materials and services. The bill was not reported out of committee.

House bill 11141 (see also S. 3561) received considerable attention during the session. It requires contractors engaged on public works of the United States to give certain preferences in the employment of labor. The House committee reported it (Rept. No. 1140) but no action was taken on it.

House bill 5772 provides for the employment of day labor by the Government where reasonable bids can not be obtained on public works. The bill was reported out of committee (Rept. No. 310) but no further action was taken.

Government Employees

MANY bills were introduced concerning Government employees. Three subjects received considerable attention: Salaries; retirement of Government employees; and night work in the postal service.

Many bills were introduced affecting the salaries of Government employees generally or of special groups of workers. The bill known as the Welch bill (H. R. 6518, Rept. No. 1503), after many changes, was passed and gave a general increase in salary to almost all Government employees. (Public No. 555, approved May 28, 1928, effective July 1, 1928.)

Next in importance to the great mass of Government employees were the bills on the subject of retirement. The bills which received the greatest attention were House bill 25 (Rept. No. 1263) and Senate bill 1727. (See S. Rept. No. 681.) The latter bill lowering age of eligibility for retirement and increasing the maximum benefits passed the Senate and was later reported to the House. (See H. Rept. No. 1580.) The bill was on the calendar in the House of Representatives at the end of the session. Two other bills introduced in the House (H. R. 13565, Rept. No. 1870, and H. R. 10288, Rept. 550) were concerned more with the administration of the retirement law. The latter was passed by the House.

A bill allowing postal employees 10 per cent additional pay for night work was passed by both houses (Public No. 496), but was vetoed by the President. The bill was then passed over the President's veto in the House on May 22, 1928, and in the Senate on May 24, 1928.

Public No. 411 (approved May 17, 1928, and effective July 1, 1928) amends the United States Code, title 39, section 823, relating to the granting of sick leave to employees in the Postal Service.

No attempt can be made here to give an exhaustive list of bills affecting Government employees, but some idea of the type of bills introduced in Congress which are of interest to labor may be had from the following bills: Giving preference in civil-service employment to honorably discharged ex-service men; limiting employment by the United States to citizens of the United States; placing under the competitive, classified civil service special groups not heretofore so included; making the wages and salaries of civilian employees of the United States subject to garnishment and levy of execution; providing that certain groups of employees shall be paid their wages

weekly; limiting the hours of labor of certain groups to eight hours per day and six days per week and in some cases limiting work on Saturdays to four hours; granting leave of absence with pay; providing for additional wages as a reward for continuous service; providing study periods with pay, for certain postal employees; permitting rural letter carriers to act as agents or solicitors outside their hours of employment; permitting the Postmaster General to contract for group life insurance for postal employees; directing the Secretary of Labor to provide for the construction and operation of dormitories for woman employees of the United States in the District of Columbia; authorizing the President of the United States to present in the name of Congress a medal of honor and written testimonial to scientific workers of the Federal Government whose labors have contributed to the advancement of scientific knowledge or to the application of its truths in a practical way for the welfare of the human race.

A bill was introduced for the purpose of encouraging and promoting labor and industry in the United States, to assist in the solution of American labor problems, and to enable American industries to benefit by the experience of foreign countries by expanding in the foreign field the service now rendered by the United States Department of Labor in acquiring and diffusing useful information regarding labor and industry. This bill will prove interesting to those who wish to see the United States Department of Labor enlarge its useful activities. (S. 4409 and H. R. 13790.)

WORKERS' EDUCATION AND TRAINING

Apprenticeship and Training in English Metal Industries

THE British Ministry of Labor has recently issued the sixth volume of its report of an inquiry made in 1925 and 1926 into methods of training workers for skilled occupations. The present volume deals with the methods used in engineering, shipbuilding and ship repairing, and other metal industries. Apprenticeship is still the favorite method of the larger industries for maintaining a supply of skilled workers. Thus in the engineering industry, in which 2,289 firms furnished information concerning their 596,139 male workers, it was found that 43,923 were apprentices and 14,724 were learners.

From the figures obtained during the inquiry it may be deduced that of all workers under 21 years of age in the industry in Great Britain about 72,000 (32 per cent) are apprentices and 25,000 (11 per cent) are learners.

More than twice as many of these apprentices were serving under verbal as under written agreements, though the proportion varied widely in different districts. Apprentices commence their training at from 14 to 16 years, 16 being the preferred age. Some employers take boys at 14, or shortly after, and employ them for a period as shop boys or general utility workers for a time before allowing them to begin apprenticeship. The period of apprenticeship ranges from 5 to 7 years, according to age at beginning training; on the whole 5 years is the commonest period for apprentices. Learners not infrequently begin at 14 and serve for 7 years. The payment of premiums for apprenticeship is not common, only between 5 and 6 per cent of the apprentices reported on having been required to make such payments. After apprenticeship has been completed, it is common to require the worker to serve for a period as an improver or "young journeyman" before permitting him to claim the full journeyman's rate of wages. This period may vary from six months to two years, but one year is the commonest duration.

Engineering was much the largest of the industries studied. In shipbuilding and ship repairing, the next in numerical importance, reports covering 103,060 male workpeople gave information as to 13,432 male apprentices or learners. On the average, the ratio of apprentices or learners was 1 to 6.7 other male workpeople. Of the 13,432 trainees, 50.5 per cent were apprenticed under written agreements, 48.6 per cent under verbal agreements, and 117 (0.9 per cent) were classified as learners. Conditions as to age at beginning, length of apprenticeship, and so on were much the same as in engineering.

The situation in the other industries covered differed mainly in the extent to which formal measures of training were in use. In such industries as the manufacture of stamped and pressed metal ware, "the work requires little actual training, and there is no apprenticeship and no systematic learnership in productive occupations." In the manufacture of cutlery, "it is to be feared that apprenticeship as a means of training is fast disappearing." But in the majority of the metal trades, apprenticeship or learnership is still the common method of recruiting the working force.

EMPLOYEE STOCK OWNERSHIP

Employee Stock Ownership Plans in the United States

THE extent to which company securities are purchased by employees and the results of the stock ownership movement formed the subject of a recent survey [1] by the National Industrial Conference Board. No plan involving stock ownership by the employees was included in the report unless it provided for the purchase of the securities in part, at least, by the employee with some cooperation from the company, thus excluding profit-sharing or bonus plans in which stock is given outright to the employees.

The practice of selling the securities of the company to employees dates from about 1893, when the Illinois Central Railroad granted a petition of the officers and employees that they should be allowed to purchase the stock of the company on easy terms. From that time on the policy of stock sales to employees was gradually adopted, although up to the end of 1915 only about 60 companies had inaugurated such a plan. The growth of the movement since that time has been fairly steady, but was most rapid between 1921 and 1925 when 162 of these plans are reported to have been started.

The present report lists 389 companies as having a stock-subscription plan, and it is estimated that approximately 1,000,000 wage or salaried workers own or have subscribed for over $1,000,000,000 worth of stock. In some of these companies there are elaborate systems for selling the stock to employees but in other cases there is no great effort made to sell the securities although the employees are helped in one way or another to finance the purchase.

Probably two of the most important points in connection with the sale of company stock to employees are the effect of the plan on industrial relations and the extent to which the rank and file of the employees participate in the ownership of the stock.

Among the reasons listed in the report which are considered to have been influential in promoting the policy of selling stock to employees are the desire on the part of industrial managers to encourage thrift and the habit of saving among the employees, to improve the relations with employees and to secure from them greater efficiency and interest in the business, or to assist employees to acquire an independent source of income as a resource in their later years. In addition to these reasons some companies, such as public utility corporations, have sold stock to employees as a means of raising new capital or to secure political advantage through the wide distribution of their securities.

Principal Features of the Plans

IN FORMAL stock subscription plans which are open to the rank and file of the workers in an enterprise, the number of shares which an individual may purchase at one time is usually limited by

[1] National Industrial Conference Board. Employee stock purchase plans in the United States. New York, 1928.

the amount of his salary or wages. In some cases there is an absolute limitation on the number of shares an employee may own but in others, while there is such a limitation on any one allotment, there is no limit on the total holdings of an employee.

There is no uniformity in practice in the type of security sold. Either preferred or common stock, bonds, or special employees' stock may be sold, while some companies have offered one kind of security to their employees at one time and a different kind at another time. Common stock has been most often sold, in many cases because the companies have had only one class of stock for sale. Since the war, however, many companies in putting out new issues, have issued preferred stock in order to make the investment more attractive and have given their employees the opportunity to subscribe for it. Some companies, also, which have both preferred and common stock have offered only the preferred to their employees as being a more suitable investment for them. Fourteen companies only of those visited were found to have sold or to be selling bonds, notes, or other obligations to their employees. In a few instances special employees' stock is issued which has no market outside of the company. This stock has been considered to have the advantage of curtailing a possible tendency on the part of the employees to speculate with negotiable securities.

The opportunity to purchase stock is limited by some companies to those holding managerial or important positions or to those earning more than a stated amount a year, but in the majority of cases cited in the report the purchase plan is open to the rank and file of the employees, although frequently there is some restriction on this right, such as the requirement of a minimum length of service. Even in those plans which permit every employee to buy, the number of shares which an employee may purchase at one time is frequently limited by the amount of his wages, and in cases when an offering of stock is oversubscribed it is usual for those whose subscriptions are smallest to receive the full amount and the others to share in inverse ratio to the amount of their subscription.

Stock may be sold to employees on a purely cash basis or credit may be extended over a period of months or years. Installment purchases are arranged often according to the requirements of the individual employees. The installment period varies among the different companies from a few months to several years but the plan most frequently followed provides for a 10 per cent initial payment and 10 months to pay the balance. Several companies arrange with outside agencies to finance the deferred payments or in a few instances one of the employees' organizations, such as the mutual benefit association or the savings and loan fund, handles the accounts. Investment funds are maintained by some companies, to which the employees contribute each payday. These subscriptions are invested in stock or bonds of the company. The amount deposited in such a fund may usually be withdrawn by the employees at stated intervals either in cash or in shares of stock.

Various methods are followed in inducing employees to purchase stock. Active publicity campaigns are often carried on but many companies carefully guard against pressure on the employee to buy, and if common stock is being sold he is warned that the company

does not guarantee a return on the investment. Inducements of a financial nature which are offered by different companies include sale of stock at less than the market price or if the stock is put out at par employees get a percentage off. Bonuses or other extra payments which reduce the final cost to the employee may also be offered. These bonuses are usually given as an inducement to the employees to stay with the company and to hold their stock.

Although cancellation of contracts is permitted in most cases without question, the employee is seldom permitted to sell or transfer his subscription himself, this provision being enforced in order to prevent speculation on the part of the employee. There is usually some penalty for cancellation. The money the employee has paid in for his stock is ordinarily refunded, but if interest is paid it may be at a lower rate.

Restrictions are placed on resale of stock by some companies where the stock has been sold to employees for some definite purpose, such as the improvement of industrial relations; but, in general, companies put no restrictions on the resale of listed securities and few of them make any provisions for repurchase. Special employees' stock which has no market outside the company and is sold to the employees for the definite purpose of securing their interest and cooperation is always repurchased by the company and in close corporations there is a provision that stock must be offered first to the company before outsiders are given a chance to buy.

One of the important factors in the success or failure of a plan of stock participation is the influence of the stock market. Thus, while in some instances employees have kept their holdings in spite of their greatly increased value, most of the companies have had the experience of having their employees sell and take their profits as the price of the stock advanced. When, on the other hand, the price of stock goes down the companies may feel forced to repurchase it, for if they fail to do this the good will gained through the plan will be lost. The repurchase agreements which add an element of security to the employee's investments are believed by some companies to be worth the cost in the good will gained by such a guaranty, but others have tried and abandoned this plan either because of the expense or because they believe that protecting the employee against risk in a falling market is unsound economics.

Effect of Stock Participation Plans in Employee Relations

THE opportunity to buy negotiable securities, particularly those which are listed, is frequently of advantage to the employees from the fact that such securities are not ordinarily available for purhase, or because they are sold by the company on favorable terms or other financial assistance is granted. The plans also offer a certain incentive to saving which otherwise might be lacking. On the other hand, in many instances these securities could be bought in the open market and banks and brokers will often loan the money necessary for their purchase, with the stock as security, and will arrange for liquidation of the debt over a period of time. Selling stocks to employees nearly always involves some cost to the company, however, and in return a company usually hopes to secure a more permanent and

efficient labor force, as well as one which has helped to protect itself against the ordinary emergencies of employment.

Theoretically the participation by employees in ownership of the company stock should make the labor force more stable, less likely to participate in labor troubles, and more interested in the prosperity of the company. As a matter of fact, as a general rule even though the stock is offered to the rank and file of the employees it is usually only the more stable element to whom the plan appeals. It has been the general experience of the companies reporting in the present study that employees who purchase stock are largely a selected group and that there is little or no effect as a result of the plan on their personnel problems. It is considered possible that in connection with plans where the payments are deferred or where there is payment of extra dividends or bonuses as a special incentive to hold the stock there may be an appreciable effect on the turnover, although generally the stock holdings are not large enough to have any great influence on an employee if a more desirable opportunity for employment presents itself. The measurement of the effect of the plan on labor disputes is also difficult, as the more comprehensive plans have been put in effect in nonunion plants, since organized labor has consistently opposed stock ownership by employees.

Measurement of the effect of the plans in increasing thrift is more nearly possible, however, and many of the companies report improvement in this respect on the part of their employees. The average holdings of the employees are, even in those plants in which they are smallest, large enough to amount to a worth-while degree of saving.

The benefits to employers in securing capital have been such as to show a balance in favor of the company no matter what the apparent outlay.

Extent of Employee Participation in the Plan

THE number of employees who take advantage of the opportunity given them to purchase stock is estimated from the available information to average about one-third.

Participation by the employees in the management of the company as a result of the stock ownership is seldom found. In general the companies in offering stock for sale do not mention the right of the stockholder to vote or otherwise participate in the management of the corporation. Even where this right is recognized there is little possibility that the employees would unite to secure substantial representation on the board of directors. In many of the large corporations in which the employees collectively own a large amount of stock they are so scattered that to get a block vote of employees is practically an impossibility. In some cases, however, the companies recognize the right of the employees to participate in the management and provide for representation proportionate to the number of shares held by the employees as a group.

The number of stockholders and the number of shares owned, however, are different matters. Even though a majority of the employees of a company may be stockholders the proportion of stock which they own is small in most instances. A study of the plans of 20 companies which have well-worked-out stock ownership schemes shows that the average aggregate ownership by the employees amounts

to only 4½ per cent of the total stock issue, while among some of these companies the majority of the stock thus owned was in the hands of persons in the technical, sales, and executive positions.

It seems evident, therefore, that even though the effect of the stock-participation plans has been favorable to the promotion of thrift on the part of the employees and has resulted in a considerable degree of saving, no direct result in increased participation by the employees in the management or control of the companies can be expected.

Employee Stock Participation in the Leighton Cooperative Industries

THE so-called "cooperative plan" of the Leighton Cooperative Industries, of San Francisco, is described in an article in the April, 1928, issue of the Journal of Political Economy.

These industries have been in operation since 1916. Started, after bankruptcy, with an original capital of $2,000, plus $1,000 contributed by several employees, the business grew rapidly and new units were opened in succession until to-day the Leighton industries include 37 units—cafeterias, dairy-lunch rooms, coffee shops, bakeries, a tailor shop, and a laundry. A stock-participation scheme was inaugurated, and this scheme, though modified from its first form, is still in operation.

Under the original plan each new business unit was incorporated separately, and the employees were encouraged to become stockholders in the unit in which they were employed. After a short time, however, this plan was changed. All the units were combined into one company, all the business being carried on in Mr. Leighton's name as president. The employees no longer bought stock; their contributions were on the basis of a personal loan to the president of the company. Dividends, not interest, were paid on these loans. Each business unit had its separate accounts and dividends were paid from the profits of that unit. Under this plan, in some cases dividends of as high as 20 per cent per month were paid.

In order to spread the loans as widely as possible the loans were reapportioned every six months, roughly on the basis of salary and length of service. If necessary, in order to take in new investors, the larger loans were cut down. If an employee left the service he was obliged to accept payment in full of his loan.

A bonus system was also put into effect, but was discontinued, as was also a later bonus plan, "because the management felt that the workers came to regard it as just a part of their wages and not as arising from their own increased productivity."

Present Basis of Plan

IN JULY, 1923, the business was incorporated with an authorized capital of $2,500,000, of which $1,500,000 had been paid in up to 1927. Under this plan the resources and profits of all the units were pooled. "This fact, in addition to the passing of war and postwar prosperity, and the growing competition in the food-serving industry, is responsible for the apparent decline in the dividend rate from the

earlier staggering dividends of most favored units to the present still considerable figure of 2 per cent per month."

The stock is of two classes—25,000 shares (15,000 issued) of common stock held by Mr. Leighton, and preferred stock held by the employees, all of par value of $1 per share. All stock transactions are on the par basis. The preferred stock receives dividends of 1 per cent, then the common the same rate, and all profits above this are shared equally between common and preferred.

Some 99 per cent of the stock is held by employees, but only the 1 per cent held by the president of the company has any voting power. "Only in case the holders of the preferred stock fail to receive 7 per cent on the par value of their respective holdings for a continuous period of 18 months do they have the right to vote at stockholders' meetings, and this right continues until dividends aggregating 7 per cent have been paid."

It is stated that "this concentration of voting control in the hands of one manager with the wide diffusion among employees of 99 per cent of the stock and dividends is the essence of the Leighton cooperative plan."

Quotas of stock are, as in the earlier plan, apportioned roughly according to salary and length of service, and the quotas are revised as necessary, in order to admit new investors. A worker who has been employed continuously for 15 days may purchase stock of $25 or more depending upon the amount available. "In practically every instance the available stock has been oversubscribed, often very heavily."

An employee who leaves must sell his stock back to the company at par value. This purchase by the company is carried on by a separate organization, the Leighton Finance Co., the voting stock of this also being held by Mr. Leighton.

Safeguards for the employees include the provisions that a considerable portion of the assets of the corporation may not be disposed of unless at least 90 per cent of the issued preferred stock is held by the employees; that the charter specifically enumerates what charges are deductible from the gross receipts and specifies that remaining net profits must be distributed as dividends; that the records are open to inspection by the employees; that no individual salary may exceed 5 per cent of the net profits of the year before; and that the corporation reserves the right to buy any stock held by outsiders. The preservation of the cooperative plan is assured by the provision that no common stock may be sold without its being first offered at par to the corporation. "The corporation, should it purchase the voting stock, as it almost certainly would, is in turn bound to sell these shares at par within 30 days to a person or corporation designated by a majority of the entire board of directors." [1]

In the event of Mr. Leighton's death, his heirs are bound by the previous provision. In case the heirs do not sell the voting stock, Mr. Leighton's will provides (as was expressly stipulated in an earlier profit-sharing contract) for a board of governors, as trustees for the heirs, to operate the industries.

In each unit there is an advisory board elected by and from among the employee stockholders of that unit, which reviews appeals from

[1] The article does not state what the composition of the board of directors is.

discharged members. It is stated that heretofore in every case the advisory board has sustained the management. In case it failed to do so, final appeal would lie to the board of directors of the company.

Results of the Plan

MANY advantages are claimed for the plan. It is stated that it makes the employee stockholders more efficient; Mr. Leighton stated in 1920 that 65 of his employees were doing work which would ordinarily require the services of 100 workers. Other results claimed are that a better class of employees is obtained, so that there is less waste, less breakage, better service, and a much lower labor turnover. The author is of the opinion that "on the whole, these claims for Leighton cooperation seem to be supported by Leighton experience."

Practically all of the workers are trade-unionists and receive "union wages or better." In addition the employees benefit by "the material increase in monthly income" from their stock.

As to the attitude of union officials toward the plan, the article states:

> In talking with officers and members of the various unions whose members work in the Leighton industries, the writer found differences in attitude corresponding somewhat to differences in skill and economic power. The least skilled workers, while gratified that union help was employed, seemed to feel rather strongly the fact that Leighton's maintains its own employment bureau in preference to hiring through the union office. Some officials of this union expressed the view that this introduced new workers to the trade who were willing to accept a working pace which older union men would refuse. An official of another union also voiced objection to the employment office, though with less bitterness, and without reference to speed of work. The most powerful union has secured an arrangement by which its members are employed through the union office, or, if employed through Leighton's office, an O. K. must be at once secured from the union office. The position taken by the management is that not enough good help can be secured through the majority of the union offices; that, even though given the right to reject men and women sent by the union, it frequently happens that not enough of the better class of workers are found in the union halls to justify sole reliance upon that channel of employment.
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> The only union complaint which the writer discovered, besides failure to use union employment offices, came also from the workers of least skill, and was to the effect that some of the men were speeded up excessively. The writer interviewed many persons employed in Leighton's and other similar industries, but found only one case where there seemed to be justification for criticism of the speed of work, and this worker was earning $28 per week and meals, which is above the average. Varied responses were received to questions concerning the rate of work. The statement was frequently made by Leighton employees that while they worked steadily they worked no harder than in similar positions elsewhere. Frequently it was stated that while they worked harder, they received more, and were therefore glad to work harder. Among employees of other cafeterias, when asked about Leighton's, it was frequently stated that they preferred their own position because one had to work harder at Leighton's, and they preferred a little less money and the more leisurely pace. Almost always they said that Leighton's had the reputation of being a good place to work. In one case a bus boy in another cafeteria said, "Bus boys don't work so hard at Leighton's as we do here, for they have trucks to carry out their dishes while we must carry trays."

Although during the decade of their existence the industries have had "an astounding expansion," there have also been some ventures which were not successful, showing that "the cooperative plan does not of itself guarantee success in any business undertaking." The business has been most successful in the food-serving industries in

which the president's ability is greatest, and least successful in those industries in which the financial management is most essential.

It is pointed out that the plan "is of course not industrial democracy."

> Mr. Leighton controls all of the voting stock. He holds that, whatever conditions may obtain elsewhere, in the food-serving industry the large proportion of floating workers necessitates concentrated management. On the part of the trade-unionists not employed in the Leighton industries, the purchase of non-voting stock arouses considerable criticism. * * * On the part of the Leighton employees themselves there is apparently no concern whatever over the matter.
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> To some of the less provident workers, even monthly 2 per cent dividends hold no great appeal. As one nonemployee said, "If I want to increase my income $4 a month at Leighton's I must invest $200. But I can go to almost any dairy lunch manager, and if I do my work well and always report regularly and promptly for duty, I can probably induce the manager to pay me $4 a month above the going rate." To such persons as these, of course, cooperation has no particular appeal. It is also true, however, that a great many improvident persons have developed a sense of thrift after employment in the Leighton industries.

The article concludes as follows:

> There is no doubt that the vast majority of the Leighton employees are loyal and well satisfied with their employment and with the cooperative plan. The most illuminating comments which the writer has heard on this point came from two skeptical union officials. One said, "While I am skeptical of Leighton's cooperation as a solution for the economic ills of society, I am obliged to admit that for those within the system it is a solution." And the other official, not too friendly to the plan, made this statement: "Those of our members who work for the Leighton industries like their employment and think the cooperative plan is a fine thing. Many of our members who do not work there think that the Leighton employees are suckers."
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> A study of the Leighton industries indicates that the plan has clearly been successful in promoting harmonious relations between employer and employee, has stimulated efficiency, and has materially increased personal incomes of stockholding workers. On the controverted questions of industrial control, there will be sharp divergence of opinion depending upon the beliefs of the observer. To the conservative business men, skeptical of employees' ability to manage but sincerely desirous of sharing profits on the basis of investment, it will commend itself. To the ardent believer in democratic control of industry the plan will appear pitifully inadequate, even a delusion, so long as voting power is held in the hands of one man.
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> The Leighton plan moves farther along the road of employee participation in investment and profits than do the better known employee stock-participation plans. And it must be recognized that even in the large corporations which sell voting stock to their employees, up to the present time the right to vote has been of no actual importance to employee stockholders, however important that right may be potentially and theoretically. Leighton's cooperation is one of those plans which are effectively tying together the economic interest and the viewpoint of employer and employee in the same industry. Those who do not desire this result will not look with favor upon Leighton's cooperation. Those who do will find the Leighton cooperative plan highly suggestive.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in June, 1928

DATA regarding industrial disputes in the United States for June, 1928, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

The bureau is dependent upon trade journals, newspapers, and labor periodicals for notices of strikes. These reports are followed up by correspondence and when necessary by personal visits of representatives of the conciliation service or of this bureau.

Table 1 is a summary table showing for each of the months—January, 1927, to June, 1928, inclusive—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working days as normally worked by the industry or trade in question. It is to be noted that the figures given include only those disputes which have been verified by the bureau.

It is to be noted that Table 1 differs from similar tables published in preceding months, as follows: First, the addition of data, recently compiled, for the first five months of 1927; and, second, the correction of the data for the months from June to December, 1927, by the inclusion of information regarding disputes in these months secured by the bureau after the close of the year 1927. The figures here presented for 1927 take the place, therefore, of the figures published in previous issues of the Labor Review.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AN D IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO JUNE, 1928

Month and year	Number of disputes—		Number of workers involved in disputes—		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
January, 1927	37	18	5,915	2,287	58,125
February, 1927	65	45	9,756	5,717	115,229
March, 1927	74	67	13,142	8,182	214,283
April, 1927	87	88	202,406	199,701	5,265,420
May, 1927	107	116	22,245	200,702	5,136,006
June, 1927	80	88	18,957	196,323	4,863,345
July, 1927	65	63	33,994	199,287	5,308,123
August, 1927	57	53	8,150	198,444	4,999,751
September, 1927	57	58	12,282	196,829	4,945,702
October, 1927	50	58	13,024	82,095	2,724,117
November, 1927	27	51	5,282	82,607	2,040,140
December, 1927	28	54	4,281	81,229	2,129,153
January, 1928	43	62	18,263	81,676	2,135,092
February, 1928	47	61	33,602	104,883	2,155,559
March, 1928	34	63	7,145	78,362	2,343,415
April, 1928	62	70	143,834	134,382	4,884,430
May, 1928 [1]	74	86	15,500	136,882	3,567,754
June, 1928 [1]	35	81	23,002	163,738	3,647,370

[1] Preliminary figures subject to revision.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in April, May, and June, 1928, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN APRIL, MAY, AND JUNE, 1928

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	April	May	June	April	May	June
Bakers	2	6		78	258	
Barbers	2	3	3	2,062	284	922
Brewery		1			8	
Building trades	22	28	7	5,560	4,460	4,180
Chauffeurs and teamsters	1	4		450	306	
Clerks and salesmen	1			490		
Clothing workers	4	4	6	520	229	9,074
Farm labor		1			36	
Fishermen		1			150	
Furniture workers	1			30		
Hotel and restaurant employees			2			245
Laundry workers	1			20		
Leather workers	1	2		31	74	
Longshoremen and freight handlers	1			25		
Lumber and lumber workers		2	1		38	55
Metal trades	2	1	1	72	87	280
Mine workers	7	11	4	106,909	6,675	2,565
Oil and chemical workers		1			1,479	
Paper and paper goods, etc		1			101	
Printing and publishing		1			13	
Slaughtering and meat packing	1			21		
Stone workers	7	1		2,073	30	
Street railway employees			1			116
Textile workers	8	3	6	25,469	207	821
Tobacco	1			24		
Miscellaneous		3	4		1,065	4,744
Total	62	74	35	143,834	15,500	23,092

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in June, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JUNE, 1928, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in June, 1928, involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 workers and over
Barbers		1	1	1		
Building trades		2	3		2	
Clothing	3	1			1	1
Hotel and restaurant employees		1	1			
Lumber and timber workers		1				
Metal trades			1			
Mine workers			3		1	
Street railway employees			1			
Textile workers		3	3			
Miscellaneous	2	1			1	
Total	5	10	13	1	5	1

In Table 4 are shown the number of industrial disputes ending in June, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JUNE, 1928, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in June, 1928					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	4 months and less than 5 months
Bakers			1			
Barbers	2	1				
Brewery and soft-drink workers			1			
Building trades	7	1	6			
Chauffeurs and teamsters	1					
Clothing	4	1		1		1
Leather			3			
Lumber and timber workers			1			
Mine workers	2					
Textile workers	3			1		
Tobacco			1			
Miscellaneous	2					
Total	21	3	13	2		1

Principal Strikes and Lockouts Beginning in June, 1928

CARPENTERS, New York.—A strike of 2,100 union carpenters against about 50 contractors in Buffalo for a wage increase from $9 per day to $10 per day lasted from June 1 to June 7, and was settled on the basis of a 50-cent increase effective October 1, 1928, and an additional 50-cent increase effective May 1, 1929.

Carpenters, Connecticut.—About 900 carpenters in Bridgeport struck on June 1 for a wage increase from $10 per day to $11 per day and a 5-day week instead of a 5½-day week.

This strike ended July 5, the terms of settlement being an immediate wage increase to $10.50 per day, and a further increase to $11 per day effective April 1, 1929. The demand for a 5-day week was withdrawn.

Barbers, Massachusetts.—About 800 barbers in Boston and vicinity struck on June 4 for renewal of the old agreement.

This strike is reported to have ended successfully by June 23.

Artists' models and manikins, Illinois.—About 4,650 artists' models and manikins in Chicago, consisting mostly of girls, began a strike on June 10 for "better working conditions, more wages and above all decency and real moral environment." The strike involved 356 establishments and ended, it appears successfully, June 25. The terms of settlement included a flat rate of $3 per hour and not more than 5 working hours per day, with a rest period of 15 minutes in every hour on ordinary posing and rest periods every 8 minutes in difficult posing. The day's work is to be in two sections of two and one-half hours each, with a two-hour interval between. Before the strike the average wage had been $1 for the first hour and 50 cents for each hour following, and the average hours 12 per day.

Building-trades workers, Illinois and Iowa.—Approximately 1,000 carpenters, painters, glazers, plasterers, and electricians, members of

the Allied Trades Council of the Tri-Cities (Rock Island, Moline, and Davenport) began a strike on June 12 in sympathy with the hoisting engineers and structural-iron workers, who demanded union recognition, which was secured from the master builders, and the strike ended June 21.

Clothing workers, New York.—According to press reports, 8,000 clothing workers in about 400 men's clothing shops in New York City were ordered to stop work on June 26 by the Joint Board of the Amalgamated Clothing Workers of America, pending an agreement by the manufacturers "to live up to the union contract and to grant a system of unemployment insurance."

This strike or stoppage it is understood ended successfully by June 28.

Principal Strikes and Lockouts Continuing into June, 1928

Dental mechanics, New York and New Jersey.—No report has been received of the ending of the strike of dental mechanics in the metropolitan district, including northern New Jersey, which began May 16.

Textile operatives, Massachusetts.—The strike of 25,000 textile workers in New Bedford, which began on April 16, still continues.

On June 27 the New Bedford Manufacturers' Association, through the secretary, announced that the mills would be reopened July 9 in the interest of those who want to return to work. The announcement follows:

> On April 9, when announcing the reduction in wages, reasons were given which made the step necessary. In the past 10 weeks nothing has occurred to modify the position taken at that time. As a result of the announcement of April 9, the mills were forced to close because of the strike action taken by the labor unions.
>
> It has been pointed out that the closing of the mills, on account of the strike, has kept large numbers from employment who, if they had the opportunity, would return to work.
>
> At the suggestion of many in the community and wishing to meet desires of those who have urged reopening in the interest of the number who want to return to work, the mills will open on Monday, July 9.
>
> Because of the shutdown and the small amount of business on hand, it will likely be possible to reemploy only a limited number for the immediate present and until business improves. As rapidly as possible it is intended to introduce manufacturing improvements and methods which will tend to lower production costs and increase the net earnings of operatives.

Very few operatives reported for work on July 9, but it is stated that the mills will be open each day in accordance with the plan announced.

Bituminous coal strikes.—On July 3 the international president of the United Mine Workers of America sent out a call for a meeting of the international executive board in Indianapolis on July 10 and a meeting of the policy committee on July 11. These meetings were called for the purpose of reviewing the strike situation in the various bituminous coal fields and to consider proposed Federal legislation dealing with the bituminous industry. Following these conferences the United Mine Workers on July 18 abandoned their demand for the Jacksonville scale as a basis for wage negotiations in the bituminous coal fields and extended to each of its districts the right to effect settlements with coal operators "upon a basis mutually satisfactory.

The new policy to be followed by the United Mine Workers is embodied in the following resolution which was adopted by the policy committee:

Resolved, (1) That the officers of the respective districts comprising the central competitive field and the outlying bituminous districts be authorized to enter into wage negotiations with their respective operators upon a basis mutually satisfactory.

(2) That district representatives and the officers of the international union shall cooperate in the execution of this policy.

(3) That all district organizations be authorized to permit any coal company or any mine to employ all the men it may require for maintenance, repairs, development, construction, or production of coal, providing, however, that such company agrees with the district to pay the existing wage schedules and carry out the existing agreement temporarily until a district agreement is negotiated.

(4) That any agreement negotiated under this policy shall be submitted for ratification to a district convention or a referendum vote of the respective districts.

Conciliation Work of the Department of Labor in June, 1928

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 40 labor disputes during June, 1928. These disputes affected a known total of 21,916 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On July 1, 1928, there were 47 strikes before the department for settlement and in addition 14 controversies which had not reached the strike stage. The total number of cases pending was 61.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, JUNE, 1928

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1928	1928		
Street railway motormen, Staten Island, N. Y.	Strike	Motormen	Asked wage increase	Pending	(1)		133	65
Carpenters, Buffalo, N. Y.	do	Carpenters	Asked increase to $1.25 per hour.	Adjusted. Two-year agreement—50 cents per day increase on Oct. 1, 1928; 50 cents also in 1929.	June 1	June 7	1,500	600
Building trades, Newburgh, N. Y.	do	Building-trades workers.	Asked 50 cents per day increase—$11.	Pending. No concessions at this time.	May 1		75	
Barbers, Brookline, Mass.	do	Barbers	Renewal of agreement	do	(1)		800	
Peninsular Stove Co., Detroit, Mich.	do	Stove workers	Alleged violation of agreement.	Pending. (Mediation refused at this time.)	June 2		87	400
Hod carriers and laborers, Bridgeport, Conn.	do	Building-trades workers.	Asked $1 per day increase	Adjusted. Returned; arbitration agreed on.	May 28	June 8	450	200
Carpenters, Bridgeport, Conn.	do	do	Asked 5-day week—$11 per day.	Pending. (Settlement expected)	June 1		900	500
Hayward-San Mateo Bridge, San Mateo, Calif.	do	Cement workers	Asked wage increase	Unclassified. Other workers employed; commissioner not engaged.	May 23		25	155
Truck drivers, Seattle, Wash.	do	Truck drivers	do	Adjusted. Agreement signed; some increases allowed.	May 28	June 4	50	
Barnet Leather Co., Little Falls, N. Y.	do	Leather workers	Piecework rates cut 10 per cent.	Unclassified. Majority returned at 6 cents per hour cut; 54 cents per hour. Commissioner not engaged.	May 9	June 7	325	32
Palace Theater, Indianapolis, Ind.	Controversy	Cement finishers	Working conditions	Adjusted. Agreement concluded	May 28	June 4	20	100
Building, Indianapolis, Ind.	Threatened strike.	Building-trades workers.	Dispute relative to daylight-saving time.	Adjusted. Accept daylight-saving time.	May 26	June 7	100	
Building laborers, Aurora, Ill.	Controversy	Laborers	Wages and nonunion labor	Adjusted. Allowed 60 cents per hour; will receive 85 cents per hour on future work.	June 10	June 14	50	
Rockland State Hospital, Orangeburg, N. Y.	Strike	Building-trades workers.	Asked increase of $2 per day—$9 per day.	Unclassified. Returned at $7 per day before commissioner's arrival.	May 1	June 4	140	360
Merrimac Woolen Mills, Lowell, Mass.	do	Weavers	Asked 2 cents per yard extra for poor materials.	Adjusted. Promised better materials; arbitration of wages.	June 5	June 13	350	
Asbestos workers, Seattle, Wash.	do	Asbestos workers	Increase of $1 per day asked	Adjusted. Returned; satisfactorily arranged.	May 24	June 12	30	7,000
Silk weavers, Wilkes-Barre, Pa.	do	Weavers	(1)	Pending	June 12		(1)	
Barbers, Boston, Mass.	do	Barbers	Hours, wages, and condition.	Adjusted. Agreement renewed; majority of workers returned.	June 4	June 18	800	
Barbers, Chelsea, Mass.	do	do	Renewal of agreement	do	June 1	June 5	21	
Capitol Fur Shop, Washington, D. C.	do	Fur workers	Violation of agreement	Adjusted. Settled in conference	June 13	June 18	10	4

Barbers, Chelsea, Mass.	do	do	Renewal of agreement	do	June 1	June 5	21	
Capitol Fur Shop, Washington, D. C.	do	Fur workers	Violation of agreement	Adjusted. Settled in conference	June 13	June 18	10	4
Valley Mining (Inc.), Nelsonville, Ohio.	do	Miners and laborers.	Dispute over checkweighman.	Unable to adjust	June 9		140	
Mallory Hat Co., Danbury, Conn.	do	Hat makers	Working conditions	Unclassified. Satisfactory agreement concluded before commissioner's arrival.	May 31	June 8	150	
Lehigh & Wilkes-Barre Coal Co., Ashley, Pa.	do	Drivers at mine	Two drivers discharged	Adjusted. Returned; drivers reinstated and case to go through proper channels.	June 18	June 19	250	
Honesdale Silk Co., Honesdale, Pa.	do	Textile weavers	Wage cut of 10 per cent	Unclassified. Prices per yard readjusted before commissioner's arrival.	do	June 22	20	40
Standard Oil Co. of Indiana, Whiting, Ind.	Controversy	Employees	Working conditions	Adjusted. Arbitrator effected compromise settlement.	do	June 29		
Shell Oil Co., Santa Barbara, Calif.	do	Building trades	do	Pending	(1)		(1)	
Electric railways, 9 cities of Connecticut.	Threatened strike.	Trolley men and bus drivers.	Asked 20 per cent increase and 8-hour day.	Adjusted. Returned without change in wages.	June 1	June 28	2,250	
Miners, West Nanticoke, Pa.	Strike	Miners	Change of conditions	Pending. (Dispute between unions; conferences pending.)	June 22		400	3
Shine Amusement Co., Buffalo, N. Y.	Controversy	Operators (theaters).	Refusal to pay union wage scale.	Adjusted. Union wage to be paid	June 1	June 22	10	75
Bakers, Essex County, N. J.	Threatened strike.	Bakers	Alleged violation of contract	Pending	June 22		(1)	
Standard Oil Co., Joliet, Ill.	Strike	Chauffeurs and gas-station men.	Two men discharged for wearing union button.	Adjusted. All but 4 workers returned.	May 23	June 1	30	
Jacket makers, New York City	Lockout	Clothing workers	Wage cuts	Pending	June 20		1,500	1,000
Price Construction Co., Baltimore, Md.	Strike	Plumbers, carpenters, steamfitters, and electricians.	Objection to nonunion labor on other jobs of this company.	do	June 19		25	20
B. H. B. Ennis, Jr., Construction Co., Baltimore, Md.	do	Carpenters, plumbers, steamfitters, engineers, steel workers, and electricians.	Nonunion electrical men employed by subcontractor.	do	do		45	50
Sears, Roebuck & Co., Cleveland, Ohio.	Controversy	Building-trades workers.	Hanging of iron doors (jurisdiction).	Unclassified. Settled without mediation.	June 4	June 10	(1)	
Hoosac Woolen Mills, Pittsfield, Mass.	Strike	Weavers	Asked increase from 8.3 to 10 cents per yard.	Adjusted. Test being made as to wages on 2-loom work.	June 22	July 1	46	300
Cope & Fischer, general contractors, Aurora, Ill.	Controversy	Sewer workers	Wage scale	Adjusted. Union wages to be paid to all crafts.	June 15	June 25	250	
Leading Upholstery Co., Souderton, Pa.	do	Upholsterers	Alleged violation of contract	Pending	June 1		(1)	
Bressler & Friedman, New York City.	do	Cloak makers	Union dispute	Unclassified. Settled before commissioner's arrival.	Feb. 1 1927	June 13	20	
Shapiro & Sons, New York City	do	do	do	do	Dec. 1	June 12	10	
Total							11,012	10,904

[1] Not reported.

Findings of Presidential Emergency Board in Orient Railway Case

AN EMERGENCY board was appointed April 28, 1928, by the President, under section 10 of the railway labor act, to investigate and report upon a dispute between the Kansas City, Mexico & Orient Railway System and its train and yard service employees, members of the Order of Railway Conductors, Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen and Enginemen, and Brotherhood of Railroad Trainmen. This board, composed of James R. Garfield, of Cleveland; Carl Williams, of Oklahoma City; Arthur Thacher, of St. Louis; Davis R. Dewey, of Cambridge, Mass.; and Homer B. Dibell, of Duluth, met at Wichita, Kans., May 11 to 17, 1928, heard representatives of the parties in dispute, and reported its findings.

A brief statement regarding the board's findings was given in the Labor Review for June, 1928 (p. 108). The full text of the findings is given below:

1. That the dispute between the brotherhoods and the carrier relates, first, to the request for the restoration or increase of pay of the employees in the train, engine, and yard service, to the standard rates of pay of Class I carriers in the western territory; and, second, to eight unadjusted claims of individual members of the brotherhoods against the carrier, commonly called grievance claims.

2. That the Orient company was under Federal control until the railroads were restored to private ownership on March 1, 1920, in accordance with the provisions of the transportation act, 1920; that the Orient was subject to the various orders regulating wages issued by the United States Railroad Administration; that after the enactment of the transportation act, 1920, which created the United States Railroad Labor Board, the employees of the Orient here involved were subject to the rates of pay established by the Railroad Labor Board; that the rates of pay were increased in 1920 and decreased in 1921 by decisions 2 and 147 of said board; that in July, 1923, upon application of the Orient company the Railroad Labor Board by its decision 1933 authorized a further decrease in the rates of pay of the train and engine service employees, by authorizing rates which were in effect in the year 1920 prior to the issuance of decision 2 of that board; and that this decrease made the Orient rates of pay below the standard paid to members of these brotherhoods on other lines;

That decision 1933, Railroad Labor Board, year 1923, contained a statement in which President Kemper of the Orient said in part as follows:

"Any surplus earned over operating expenses, including interest on the receiver's certificates securing the Government loan—which interest is $150,000 per annum—shall be distributed pro rata among the employees in an amount sufficient to bring them up to the standard wages fixed by the United States Railroad Labor Board, it being distinctly understood that you will receive standard pay for Class I carriers, providing the earnings permit."

At the hearings before this emergency board on May 15, 1928, President Kemper again stated in part:

"I want to state to you just as I think I stated, if I didn't our general manager did, in 1923—I mean every word of this—these gentlemen referred to it—we made a promise that when we got an opportunity to do so, we would pay them the same wages that were paid on other railroads. I want to make that promise right here in my testimony before this commission. There is not anybody connected with this railroad that it would make happier than it would me if I felt we could safely pay these men the demands they are making, but I would not want to pay it just to them. We have a lot of men that have been just as loyal, just as faithful, and just as important toward the saving of this railroad as these men who are here before you to-day."

That the Orient company increased the rates of pay in 1925, but, as this increase was general in the territory through which the carrier operates, it still left the average rates of pay of its train and engine service employees below the standard for the territory; that throughout the hearings before this emergency board it was

the announced policy of the carrier to increase the wages of all employees as soon as revenues will permit. The statement is accepted by the board as made in good faith and as one which will be carried out without evasion.

3. That on August 23, 1927, the system representatives of the four transportation brotherhoods served the usual 30-day notice on the representatives of the carrier to open their agreements or schedules and requested an increase in rates of pay to the extent of restoration of the standard rates of pay; that after various conferences the carrier, on November 5, denied the wage request; that grand lodge officers were thereafter assigned to the case; that negotiations were continued at intervals; that on March 26, 1928, the grand lodge officers submitted a strike ballot to the brotherhood employees on this carrier; that the ballot did not provide for submission to the employees of any counterproposals which might be made by the carrier; that the ballot was substantially unanimous in giving the grand lodge officers full power to settle the dispute or call a strike; that on April 10, in conference, the carrier did offer certain increases in rates of pay, less than the amounts asked by the employees. This offer was rejected by the grand lodge officers.

During these negotiations, extending over a long period of time, there were frequent delays which apparently created friction and made it difficult to arrive at a settlement without resort to Federal agencies established for that purpose.

That on April 18 the grand lodge officers applied to Samuel E. Winslow, chairman of the United States Board of Mediation, and in a telegram asked for mediation as follows:

"The undersigned grand officers of engineers, firemen, conductors, and trainmen, assisted by four committees, have broken off negotiations with management, Kansas City, Mexico & Orient Railway on demands for standard wages and settlement of number of grievances. Management declines to join in requesting mediation. Strike vote has been taken and men unanimous in desire to leave service unless satisfactory settlement reached at early date. To fully comply with railway labor act, before taking further action we are requesting you get mediator on ground soon as possible, as employees involved are demanding action."

That the board of mediation telegraphed the grand lodge officers that George A. Cook, mediator, would go to Wichita, Kans., to investigate and render such assistance possible in connection with existing differences; that the mediator arrived in Wichita, Kans., on April 23 and conferred first with the representatives of the employees, and then alternating with the representatives of the carrier in daily conferences to and including April 28; that the mediator's efforts were unsuccessful; that following the provisions of the railway labor act the mediator then attempted, on April 26, 1928, to induce the parties to arbitrate the wage question in dispute; that the representatives of the employees expressed an unwillingness to arbitrate; that the representatives of the carrier expressed a willingness to arbitrate; that on the same day the grand lodge officers issued their order for a strike, the order to be effective at 6 p. m. Sunday, April 29; that on April 28, 1928, the President issued a proclamation creating an emergency board to investigate the dispute and to report its findings to the President within 30 days from that date; and that on the same day representatives of the employees and of the carrier expressed their intention to conform to the provisions of the railway labor act by agreeing to make no change in the conditions out of which the dispute arose for the required period of 30 days after the emergency board shall have submitted its report to the President.

4. That the Orient company before its differences were in mediation offered to increase the rates of pay of the employees represented by the four brotherhoods in an amount which would, it claimed, increase its annual pay-roll expense approximately $62,000; that this amount is approximately $47,000 less than the amount asked by the members of the four brotherhoods' employees; that by negotiation with other classes of employees receiving lesser rates of pay increases were mutually agreed upon in such amount that the annual pay roll was increased approximately $35,000; and that the rate of increase offered the brotherhoods was slightly greater than that negotiated with other classes of employees.

5. That the road ever since its organization in 1900 has often been in desperate financial straits. Its line was projected from Kansas City, Mo., to Topolobampo, a port on the Gulf of California in the Republic of Mexico. The line has been built in three unconnected sections: From Wichita, Kans., to Alpine, Tex.; Marquex, Mexico, to Sandrez, Mexico; Altillo, Mexico, to Topolobampo, the Mexican port. The gap between Alpine, Tex., and Marquex, Mexico, is about

100 miles, of which 84 are in Texas. The gap between the central and western sections is 165 miles.

The corporate organization consists of three corporations organized (a) under the laws of Kansas—operating the lines in Kansas and Oklahoma; (b) under the laws of Texas—operating the lines in Texas, and (c) under the laws in Mexico—operating its properties in that country. The Kansas corporation owns and controls the other companies, and the properties have always been managed as a unit.

The financial history of the enterprise is one of heavy loss and constant difficulty. It has been through two receiverships and reorganizations—the first during 1912–1915, the second during 1917–1927. The final proceedings in the recent receivership are now before the Federal court. The plan of reorganization was fully considered by the Federal court in the case of Trustees Corporation (Ltd.) *v.* Kansas City, Mexico & Orient Railway Co., 18 F. (2d) 764; the plan was found fair and approved by the court.

6. That the Orient is an interstate carrier having a line from Wichita, Kans., passing through western Oklahoma and terminating, for its American line of 737 miles, at Alpine, Tex.; that it taps an extended section of southwest Texas and some counties in Oklahoma not conveniently served by any other carrier; that the railway is a poorly constructed road and for years has been undermaintained in spite of what appears to have been skillful management; that it has not had sufficient income for operations nor capital for betterments; that no other company has been connected with it or interested to give it financial support; that there is built up along the line a large population dependent on it for essential transportation service; that, in the opinion appended to the decision of the Railroad Labor Board in 1923 and signed by its chairman, this statement appears in part as indicating the natural condition of the country traversed, the condition of the carrier as it then existed, and the reasons for the permission then given the carrier to decrease the employees' rates of pay:

"Along its line industries of many kinds have gained a foothold, though the development is mainly agricultural. Like many other railroads which have been thrust by daring men into these expansive, virgin domains of the West, this carrier is going through a period of financial hardships.

"The enormous deficits which it has piled up year after year now threaten to force its suspension. This would be a calamity to the general public which it serves and to the men whom it employs. The matter is of such grave concern that the governors of three States have conferred in regard to it, and the people have held public meetings. The Interstate Commerce Commission has loaned the carrier money and has issued certain orders designed to increase its revenues. States and counties have temporarily waived the collection of its taxes."

That there has been a marked increase since 1923 in the traffic in cotton, cottonseed, livestock, and livestock products; that the discovery of oil fields in southwest Texas has resulted in large additional outbound traffic in oil and in large additional inbound traffic in oil-field supplies, in building materials, and in other commodities to satisfy the needs of a rapidly growing oil-field population; that this additional income now enables the carrier to begin to fulfill its 1923 promise of wage adjustments to its employees; that the evidence fails to show that the present oil-field traffic can be measured in terms of permanent annual revenue or that it will at all increase; that, in fact, it is likely to decrease because of the building of pipe lines for the transportation of oil from a proven field; and that therefore the revenues of the carrier are still in a precarious condition.

7. That a stoppage of the operations of the Orient would be a substantial interference with interstate commerce; that it would result in depriving a large number of citizens in Kansas, Oklahoma, and Texas, who have settled along the line or in tributary country, from essential railway transportation; and that it is of vital public interest that this service be maintained.

8. That the employees, in the hearing before the emergency board based the rates of pay, covered by their demand, upon the award of the Chicago arbitration of the western carriers with the conductors and trainmen rendered in May, 1927; while the carrier claims that it is governed by the decision of the Labor Board of 1923 under which it was authorized to pay substandard rates. In the opinion of the board this carrier was not a party to nor is it bound by the award of the Chicago arbitration, but that the carrier is now and in the future morally bound by its promise, made in connection with Railroad Labor Board's decision 1933, to restore standard rates of pay to its brotherhood employees and, as nearly as such standards can be determined, to all other of its employees as soon as operating revenues will permit.

9. That in view of the accumulated financial difficulties of the carrier and inadequate earnings to meet current needs of maintenance, the carrier is not at present justified in paying rates of wages, to the employees represented by the four brotherhoods, higher than the advances now proposed by the carrier, having due regard to the maintenance of the road and the equitable compensation of employees in other branches of service.

10. That the four brotherhoods are not justified under the circumstances stated in carrying out their strike order, and should either accept the advances offered them, or they should arbitrate their wage dispute under the railway labor act; and if they accept the increase offered it should be made effective by the carrier from April 16, 1928, the date on which increases to other employees took effect.

11. That the railway labor act contemplates, as an important instrumentality in its administration, the establishment of boards of adjustment for the settlement of grievances and provides for their creation by subdivision 1 of section 3; that in subdivision 2 of the same section it provides that in lieu thereof the carrier and its employees may adopt such agreement as they choose for the settlement of disputes; that the four brotherhoods are members of the regional boards of adjustment now functioning for the employees represented by them; that these boards were created in three of the four regions some years ago by mutual agreement between a large number of carriers and the four brotherhoods and are the outgrowth of many years of uninterrupted contractual relationship between the parties; that these boards decide disputes arising out of grievances or out of the interpretation or application of the complicated and technical agreements concerning rates of pay, rules, or working conditions not adjusted by the parties in conference; that it is essential in the interests of peace and harmony under the railway labor act that the carriers having so-called standard rules governing working conditions in train and engine service should provide an avenue for the settlement of unsettled grievance claims with these organizations which, by their contracts or agreements in effect with practically all carriers in each region, are automatically members of regional adjustment boards when created; that the Orient Co. does not belong to such a board; that there is functioning with headquarters at St. Louis, Mo., the Southwestern Train Service Board of Adjustment; that the brotherhoods are members thereof; that though the carrier offered to take the eight grievance cases involved in the present dispute to this board it has thus far refused to become a member; that it has proposed to the brotherhoods a form of agreement pursuant to subdivision 2; that they declined it; that they are justified in declining it; that the carrier is not justified in refusing to become a member of the Southwestern Board of Adjustment; that it should become a member forthwith; that such board would care for the eight unadjusted grievances of which the brotherhoods are now complaining, and of future grievances; and that it is not the province of this emergency board to determine the merits of the individual cases.

Operation of Labor Courts in Germany

A NATIONAL law enacted in Germany on December 23, 1926, provided for the establishment of labor courts to pass upon claims for damages, arising under the existing labor law, made by employees of all classes against their employers and by employers against their employees. Prior to the organization of the labor courts there were industrial and commercial courts having somewhat similar functions although less extensive jurisdiction. The jurisdiction of the labor courts, as noted above, extends to all classes of workers, including agricultural workers, domestic servants, and office employees.

Each court is presided over by a judge having a professional training, assisted by an employers' representative and a workers' representative. The court is under State administration and the costs are defrayed by the State. Neither the plaintiff nor the defend-

ant is permitted to employ a lawyer in bringing cases before the court. The parties concerned may, however, have the assistance of delegates from the labor unions or from the employers' organizations. It is reported that the cases brought before the courts are settled quickly and with a minimum of expense. An attempt is usually made to arbitrate a case before it is opened in the court.

An account of the operation of these courts in Wurttemberg during the first half year of their existence—July 1, 1927, to December 31, 1927—is given in a report dated May 16, 1928, from John E. Kehl, American consul at Stuttgart. The report states that during this period the courts passed upon 2,778 cases brought before them, in addition to settling 89 cases carried over from the previously existing industrial and commercial courts. However, of the 2,778 cases, 964 did not go beyond the arbitration stage and in 530 the complaint was withdrawn. The amount of damages claimed was small in most cases, four-fifths of them involving less than 300 marks.[1] More than half of the cases were settled in less than one month's time and practically all of the remainder in less than three months' time.

Twenty-six labor courts were organized and began functioning in Wurttemberg on July 1, 1927, according to the report.

Compulsory Arbitration of Disputes Under Existing Agreements in Sweden

THE Swedish Parliament on May 25 enacted legislation providing for the compulsory arbitration of differences arising under collective agreements already in existence and for the creation of a labor court to settle these differences.[2]

The law prohibits, during the life of a collective agreement, lockouts, strikes, blockades, boycotts, or other measures of aggression in consequence of a dispute regarding the validity, duration, or proper interpretation of the agreement, or in consequence of a dispute as to whether a certain procedure is contrary to the agreement or to the provisions of the new law relating to collective agreements, in order to effect a modification of the agreement; to force the acceptance of a provision which is to become effective after the agreement has expired; or to assist any person who is not himself entitled to take aggressive measures. If an organization or a member thereof is bound by a collective agreement, the organization may not organize or otherwise bring about prohibited aggressive action or support such action. Such an organization must also endeavor to prevent its members from resorting to illegal measures of aggression and from persisting in aggressive action which may already have been taken.

Separate agreements which are contrary to the provisions of existing agreements will be invalid.

The labor court created by the new legislation is to consist of a chairman and six members, and will sit in Stockholm. No appeal may be made from the decisions of the court.

[1] Mark at par=23.8 cents; average exchange rate for 1927 was about par.
[2] Report from the American Minister at Stockholm, dated June 1, 1928.

Strikes in Uruguay, 1920 to 1926

THE 1926 Statistical Yearbook of Uruguay [1] contains figures on strikes in that country, from which the following statement has been taken for the period from 1920 to 1926:

	Number of strikes	Number of strikers
1920	193	16, 303
1921	146	2, 958
1922	35	5, 819
1923	114	1, 117
1924	22	858
1925	11	268
1926	5	600

[1] Uruguay. . Direccion General de Estadistica. Tomo XXXV, Parte 6. Anuario Estadistico, 1926. Montevideo, 1928, pp. 506, 507.

LABOR ORGANIZATIONS

Trade-Union Membership in Japan [1]

AT the close of 1927 there were 505 trade-unions in Japan, according to the Japanese Bureau of Social Affairs. This number represented an increase of 17 over that reported for the close of the first half of the same year. The membership of the 505 unions by industrial groups and by sex is given in the following table:

NUMBER AND MEMBERSHIP OF TRADE-UNIONS IN JAPAN AT END OF 1927

Industrial group	Number of unions	Membership		Total
		Male	Female	
Machine and tools	72	96,188	994	97,182
Chemical	57	7,904	1,208	9,112
Textile	19	7,695	7,857	15,552
Food and drink	13	4,580	699	5,279
Miscellaneous	86	14,260	801	15,061
Mining	11	11,196	2	11,198
Gas and electricity	10	8,819	6	8,825
Transport	61	115,477	709	116,186
Communications	1	871		871
Civil engineering and construction	26	2,560		2,560
Others	149	26,919	748	27,667
Total	505	296,469	13,024	309,493

Commercial Employees' Association in Rio de Janeiro, Brazil

THE development of a commercial employees' association in Rio de Janeiro, which claims to be the largest of its kind among Latin peoples, is described in a report from the American consul general, Claude I. Dawson, dated April 17, 1928, and in the June, 1928, issue of the Pan American Union Bulletin (p. 642).

The organization was established in March, 1880, to agitate for a Sunday closing law, which was passed and made effective in the municipality and later throughout the country. Starting with a membership of 43 it has grown until it now has about 31,000 members.

Among the benefits and services for members are a pharmacy and clinic wherein 42,005 consultations were given during the past year. The association's physicians made 1,040 visits to homes, and its surgeons performed 550 operations. Injections of various kinds numbered 40,588, and 23,824 treatments were given. The dental section attended 22,887 patients. The organization's employment bureau places annually hundreds of employees, while its commercial school enrolled 300 young men during 1927. Subsidies distributed

[1] International Labor Office. Industrial and Labor Information, Geneva, May 28, 1928, p. 309.

to members at the end of 1927 amounted to 3,983,813 milreis.[2] The association maintains a school of military instruction which permits 2,460 young citizens to fulfill their compulsory military training without interrupting their professional duties. Its library has 20,000 volumes and publishes the magazine of the association. In addition to these benefits the association has secured reduced prices for its members in many lines of commodities. It is responsible for the law granting an annual vacation to employees, as well as for the improvement of other labor legislation. It owns property in the heart of the Brazilian capital valued at 7,000,000 milreis.

[2] The exchange rate of the milreis in December, 1927=11.97 cents.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Manufacture of Utensils and Wares from Aluminum, Brass, and Copper, 1927

THE data used in this presentation were collected from establishments using aluminum, both sheet and cast, in the manufacture, mainly, of pans, kettles, pots, and other general kitchen and household utensils, and from establishments engaged in the production of brass and copper articles such as boxes, butts, burners, clamps, eyelets, canopies, cases, fasteners, ferrules, flanges, grommets, automobile parts, name plates, radio parts, rivets, ash trays, lipstick holders, electric-light shells, flash-light parts, cigar and cigarette cases, lighting fixtures, and lighting-fixture parts, bathroom fixtures, switch plates, bottles, pencil tips, cigar lighters, humidor covers, cuspidors, kettles, percolators, boilers, measurers, funnels, teapots, lamps, etc.

Some establishments use aluminum mainly, but also use brass and copper. No plants were included which are generally known to the trade as brass and aluminum foundries. Incidentally, some of the establishments using brass and copper chiefly also use quantities of nickel-silver, Monel-metal, or other alloys, but since the same employees, the same machines, and the same operations are involved in working these metals, separation was impossible.

The establishments from which data were collected have varying lengths of pay-roll periods—1 week, 10 days, 2 weeks, and one-half month. In order to present data for all establishments and employees on the same basis, the days, hours, and earnings were compiled for a one-week period for the establishments that have a longer pay period; thus the tables represent a sample week.

All data were obtained by agents of this bureau directly from the pay rolls and other records of the establishments. In some States the establishments of importance making these articles are so few that figures for the State might disclose the identity of the establishments. Since it is the policy of the bureau not to publish information in such form as to reveal the figures of a single establishment, one State (Connecticut) in which there was a considerable number of establishments is shown separately and the remainder are combined into two groups of several States each—the eastern group comprising New Jersey, New York, and Pennsylvania, and the western group Illinois, Ohio, and Wisconsin.

Processes and Occupations

THE processes of manufacture of a few typical articles are here briefly described.

Some establishments making drawn and spun articles roll their own sheets from the billets of metal. Others buy their sheets, while

still others buy blanks of proper sizes. If sheets are used they are first passed through a blanking press fitted with dies to cut them into blanks of the proper size to produce the article. The size is predetermined by engineering calculations and experiment.

Teakettle.—To make a kettle, for example, the blank is placed in position over the "female" die and the "male" die is pressed down against it, forcing it down into the female die, taking its shape in the space between the male and the female. This produces what is in most establishments termed a "shell," the edge of which is more or less ragged and the sides having more or less wrinkles. The shell is now placed in the spinning lathe, the outside of the bottom of the shell against the head of the lathe and secured by another head which is on a lateral screw shaft. This second head is forced against the inside of the bottom. A tool is placed inside the shell to help in giving the desired shape to the shoulder. Another tool is applied against the outside of the shell while the latter is rapidly rotated. The wrinkles are smoothed out and the shoulder and top formed. The extra metal which results because the top of the kettle is smaller than the bottom is stretched upward and finally cut off at the required height where the opening is to be left for the cover. The edge of this opening is turned outward and rolled over to a smoothly finished rim into which the cover will fit. In some better grades the edge is rolled over a wire ring, making a much stronger cover hole. The spinner may trim and bead the cover hole or this operation may be done by another person on a machine constructed especially for the purpose. At about this stage the hole for the spout is punched in the side, and also the holes where the ear will be riveted on.

In aluminum kettles the spout is welded on by the oxy-acetylene process. Spouts can be soldered onto copper kettles, but no plant is using a soldering process for this work on aluminum ware. The ears, which have been previously formed and punched by other presses, are riveted on either by machine or by hand. The outside of the kettle is now subjected to a polishing operation by being held against a wheel, the edge of which is covered with a fine abrasive substance. A length of heavy wire is inserted through a handle, the wire bent into shape to form the bail, the ends of the wire flattened and holes punched or drilled in them. Through these holes and through the holes in the ears rivets are placed and headed over with sometimes a washer added to insure more strength. Some copper kettles are nickel plated on the outside before polishing, while the inside is usually tin plated. Aluminum is never plated. While these operations have been going on in making the kettle itself, the cover has been going through its processes of completion, being drawn from another blank, the edge turned over, backward and downward to form the apron (the part which enters the hole in the top of the kettle), the hole punched for the knob screw or rivet and the outside of the cover polished, the knob being then fastened on by a rivet or by a bolt and nut.

Aluminum convex saucepan.—The proper-sized blank is formed into a shell in the same way as stated in the description of the teakettle. The shell is placed in the spinning lathe and the sides are shaped convexly between the tools. The edge is turned over into a bead,

either on the same lathe or on a separate trim and bead machine. The bead may or may not be formed over a wire, but usually is not. The holes, usually three in triangular position, are punched near the top for riveting on the handle. The inside is finished with sandpaper or emery cloth, but is not buffed to a high luster. The handle is then riveted on either by hand or machine. The outside is then highly buffed. The cover, having no great depth of form, can usually be blanked and drawn in one operation. The hole for fastening the knob of the cover is punched. The cover is then trimmed and beaded on a machine specially adapted to the work. This is usually done in one operation, but sometimes requires two operations. Covers for better-quality articles are beaded over a wire to increase the strength and insure against denting and warping. The inside of the cover is full polished, while the outside is highly buffed the same as the outside of the pan. The knob may be fastened on in one of several ways—with bolt and nut, by riveting, or with screw and eyelet. Saucepan covers are not made with aprons to fit inside the top of the pan, but are shaped with a groove or channel on the under side which fits closely over the bead on the pan. As aluminum is soft and bends easily, the handles are stamped from cold-rolled steel and are usually tinned to prevent rusting.

Brass ash trays.—These are common articles, being made in several establishments. As they are not usually very deep the shape can often be obtained in one blanking and drawing operation. In some, however, a spinning operation is necessary. The edge is then trimmed and beaded in one or two operations. Most ash trays are supplied with a match-box holder. This necessitates a hole being punched in the edge through which to insert a screw into the post of the holder.

Some of them receive a buffed finish; others are finished with a scratch brush polish which leaves them bright but not of so smooth a luster. If they are not to be finished further they may be lacquered to prevent tranishing from the air. Some of them are nickel plated, and some are finished by burning on color with a torch. Most of them have one or more cigar rests, and some are supported on legs, these being attached by soft soldering.

Cast aluminum.—Utensils covering a wide range are also produced by casting. Among them are teapots, teakettles, percolators, pitchers, skillets, griddles, frying pans, cookers, casseroles, pots, saucepans, kettles, roasters, waffle molds, and gem pans. A pattern of the shape of the outside of the utensil is placed in a flask and damp sand is solidly tamped around it. The pattern is removed, leaving the impression in the sand. A core of the shape of the inside of the utensil is placed in this impression, leaving space between it and the wall of sand. The aluminum is melted in a cupola and is poured into the mold. If the utensil is of such shape that the core can not be removed, the core must be made of such material as can be readily broken up inside the utensil and shaken out. Some establishments use iron molds. As aluminum melts at a much lower temperature than iron, the mold remains intact when the molten aluminum is poured into it. After the casting is taken from the mold the gates, sprues, and rough edges are ground off. The utensil is then polished. The handles of frying pans and skillets are cast solid with the rest of the

utensil. Spouts for teakettles, teapots, etc., are cast separately and welded into place. A cast aluminum utensil is necessarily much heavier than a sheet aluminum utensil of the same capacity.

The occupations shown in the table following, with their definitions, are—

Tool and die makers: High-grade mechanics who make tools, dies, jigs, and fixtures for use in the various operations.

Die setters, tool setters, and machine setters: Die setters place dies in proper position on stamping, drawing, or punch presses. Tool setters place tools in machines and adjust them when operator can not perform such service for himself. Machine setters set up machines complete for operators who can not do this work for themselves.

Blanking-press operators: Operate power presses which cut sheets of metal to various shapes. Such a press might almost complete an article when the form is simple.

Draw-press operators: Operate power presses fitted with dies between which the metal is drawn to form. Several operations are sometimes necessary to complete the form. In such cases the metal may need to be annealed between operations.

Trim and bead operators: After being drawn the article has a rough or ragged edge. The trim operator places the article in a machine and trims this edge smooth and even. Generally the edge is then rolled over, usually outward, to give an added strength and a good finish to the edge of the utensil. Sometimes the two operations are performed at the same time.

Annealers: Operate furnaces in which the metal is softened by gradual heating and cooling.

Punch-press operators: Operate power presses to punch holes for rivets, etc.

Spinning-lathe operators: Operate lathes in which metal is shaped into forms which can not be shaped on draw presses. The work rotates rapidly between two tools—the tool inside the work being called the forming tool and the outside one being called the burnishing tool.

Riveters: Fasten parts or lapped edges of the same part together with rivets, using a riveting machine.

Solderers: Fasten parts or edges of parts together with solder, using soldering irons and flux, or blowpipe and flux. The soldering of aluminum was found to be not in practical use. Brass and copper, however, are readily soldered.

Coppersmiths: Those thoroughly versed in all the operations in the working of copper articles.

Welders: Join parts of metal together by use of the oxy-acetylene torch. In butt welding the two edges are made to meet. In lap welding the edge of one piece is laid beyond the edge of the other piece.

Bench hands: Do various operations, usually at a workbench—filing, reaming, scraping, fitting, hand riveting, etc.

Knurlers: Operate lathelike machines which roughen a portion of surface similar to the roughness on the edge of a coin.

Polishers and buffers: Use buffing wheels and a fine abrasive, or a scratch brush, in finishing outside surface.

Satin finishers (also matte or dip finishers): Finish the outside surface of aluminum by successive baths of benzine, soda, nitric acid, and boiling water.

Platers, nickel: Cover the surface of brass or copper articles with a coating of nickel by electric process.

Pattern makers: Make wood or metal patterns for the use of the molder.

Molders: Make molds, using box, sand, and wood or metal pattern, and pour molten metal into the mold.

Melters, furnace men, and crucible men: Tend furnaces or other devices in which metals are melted preparatory to being poured into molds.

Inspectors: Examine articles during process of manufacture and also after finishing for the purpose of detecting flaws and imperfections.

Wrappers: Wrap articles in paper to prevent marring in packing.

Packers and craters: Pack articles in boxes or crates for shipment.

Laborers: Do various unskilled jobs, such as carry or wheel material, bale scrap, carry dies and tools, mix pickle under the direction of the plater, string and hang articles in the baths, clean articles with sawdust and gasoline or waste or rags, etc.

Other employees: Tool-crib men, working foremen, straw bosses, routers, stock chasers, electric truckers, helpers, elevator operators, millwrights, machinists, machine repairmen, etc.

Overtime Rates and Bonuses

OF THE 32 establishments covered in this study, 15 had some form of extra pay for overtime.

Of these, six paid time and a half and two time and a quarter after normal daily hours, while one paid time and a half to mechanical employees and time and a quarter to other employees. One establishment paid time and a half after 9 hours per day, one paid time and a quarter after 10 hours per day, and one paid time and a quarter and one time and a half after 48 hours per week. One plant paid time and a half after 10 hours per day to maintenance men only and one paid time and a half after normal hours to tool-room employees, yard gang, and electricians.

Eleven establishments reported bonus systems. Two of these were based on service and nine on production. Of the two establishments reporting a service bonus, one paid 5 per cent of the yearly earnings after one year's service and one-half per cent additional for each year thereafter. The other gave 3 per cent of yearly earnings for an entire year's service and $4 additional for 1 to 18 years' service, $6 additional for 18 to 21 years' service, and $10 additional for 21 years or over.

All of the production bonuses are based on some arbitrary standard which is usually set by time studies of the various occupations. The efficiency standard or minimum acceptable production varies in each establishment, as does also the scale or rate. This scale or rate is usually graduated, beginning at the minimum standard of efficiency and gradually increasing as the production increases.

In three of the nine establishments which reported production bonuses only certain employees participated. In one establishment

only the coppersmiths were entitled to a bonus, in another only packers and shippers, while in the third only the permanent molders received the bonus.

Statistics of Wages and Hours

THE following table shows full-time and actual hours and earnings in each of the occupations:

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Tool and die makers, male:								
Connecticut	4	181	5.6	49.5	52.3	$0.752	$37.21	$39.33
N. J., N. Y., and Pa	9	67	5.9	50.2	50.2	.765	38.37	38.37
Ill., Ohio, and Wis	10	56	5.9	51.0	50.8	.755	38.47	38.35
Total	23	304	5.7	49.9	51.6	.755	37.70	38.96
Die, tool, and machine setters, male:								
Connecticut	4	285	5.7	52.3	53.6	.611	31.95	32.75
N. J., N. Y., and Pa	5	23	5.8	54.6	50.6	.694	37.91	35.12
Ill., Ohio, and Wis	5	7	5.4	50.3	50.2	.594	29.86	29.82
Total	14	315	5.7	52.5	53.3	.617	32.34	32.89
Blanking press operators, male:								
Connecticut	4	52	5.8	52.4	53.7	.564	29.55	30.29
N. J., N. Y., and Pa	6	14	5.8	48.4	49.1	.611	29.55	30.00
Total	10	66	5.8	51.5	52.7	.574	29.55	30.25
Draw-press operators, male:								
Connecticut	4	46	5.6	48.7	51.8	.562	27.35	29.11
N. J., N. Y., and Pa	8	49	5.7	53.5	50.8	.609	32.61	30.94
Ill., Ohio, and Wis	12	61	5.4	49.3	52.0	.541	26.67	28.13
Total	24	156	5.5	50.4	51.6	.570	28.74	29.41
Draw-press operators, female: Connecticut	3	46	5.1	43.9	53.0	.380	16.66	20.14
Trim and bead operators, male:								
Connecticut	4	68	5.4	48.4	53.4	.531	25.71	28.36
N. J., N. Y., and Pa	7	37	5.8	53.2	50.9	.603	32.10	30.69
Ill., Ohio, and Wis	11	46	5.5	48.9	52.6	.516	25.27	27.14
Total	22	151	5.5	49.8	52.5	.545	27.14	28.61
Trim and bead operators, female: Connecticut	4	46	5.7	48.1	51.6	.343	16.48	17.70
Annealers, male:								
Connecticut	3	11	5.9	60.6	59.2	.531	32.22	31.44
N. J., N. Y., and Pa	3	5	5.4	47.1	49.9	.504	23.72	25.15
Total	6	16	5.8	56.4	56.3	.524	29.56	29.50
Punch-press operators, male:								
N. J., N. Y., and Pa	6	37	5.6	51.2	50.7	.517	26.50	26.21
Ill., Ohio, and Wis	11	68	5.3	47.1	52.0	.468	22.05	24.34
Total	17	105	5.4	48.6	51.5	.486	23.62	25.03
Punch-press operators, female:								
Connecticut	3	174	5.7	51.0	53.9	.364	18.58	19.62
N. J., N. Y., and Pa	5	25	5.4	47.6	52.1	.315	15.00	16.41
Ill., Ohio, and Wis	3	55	5.2	44.8	50.1	.348	15.57	17.43
Total	11	254	5.5	49.3	52.9	.356	17.58	18.83

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Contd.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Spinning-lathe operators, male:								
N. J., N. Y., and Pa	12	69	5.7	51.7	52.0	$0.712	$36.80	$37.02
Ill., Ohio, and Wis	11	85	5.3	46.9	51.2	.561	26.31	28.72
Total	23	154	5.5	49.1	51.6	.632	31.01	32.61
Riveters, male: Ill., Ohio, and Wis	7	19	5.8	54.0	52.3	.499	26.92	26.10
Riveters, female:								
N. J., N. Y., and Pa	3	6	5.5	46.1	49.7	.317	14.63	15.75
Ill., Ohio, and Wis	4	38	5.0	42.3	51.0	.349	14.76	17.80
Total	7	44	5.0	42.8	50.8	.344	14.75	17.48
Solderers, male:								
Connecticut	3	36	5.9	52.4	51.9	.555	29.06	28.80
N. J., N. Y., and Pa	6	38	5.8	50.7	49.4	.680	34.47	33.59
Total	9	74	5.9	51.5	50.6	.618	31.84	31.27
Solderers, female: Connecticut	3	88	5.8	52.3	54.0	.389	20.31	21.01
Coppersmiths, male: N. J., N. Y., and Pa	4	49	5.5	49.3	51.1	.793	39.11	40.52
Welders, male:								
N. J., N. Y., and Pa	4	21	5.4	47.2	52.9	.771	36.43	40.79
Ill., Ohio, and Wis	10	33	5.2	46.6	51.3	.639	29.82	32.78
Total	14	54	5.3	46.9	51.9	.691	32.39	35.86
Bench hands, male:								
Connecticut	3	45	5.7	51.9	53.1	.479	24.82	25.43
N. J., N. Y., and Pa	5	109	5.8	52.1	53.7	.558	29.10	29.96
Ill., Ohio, and Wis	10	72	5.5	48.9	52.6	.425	20.81	22.36
Total	18	226	5.7	51.1	53.2	.502	25.61	26.71
Bench hands, female:								
Connecticut	3	287	5.7	52.4	54.6	.351	18.37	19.16
Ill., Ohio, and Wis	4	16	5.1	43.7	50.3	.324	14.16	16.30
Total	7	303	5.7	52.0	54.4	.349	18.15	18.99
Knurlers, female: Connecticut	3	11	5.4	47.7	53.6	.391	18.66	20.96
Polishers and buffers, male:								
Connecticut	4	270	5.3	49.9	52.6	.633	31.61	33.30
N. J., N. Y., and Pa	13	291	5.6	49.2	51.4	.733	36.05	37.68
Ill., Ohio, and Wis	15	306	5.6	48.5	50.8	.684	33.15	34.75
Total	32	867	5.5	49.2	51.6	.684	33.64	35.29
Satin finishers, male: N. J., N. Y., and Pa	3	30	5.6	51.4	52.6	.589	30.29	30.98
Platers, nickel, male:								
Connecticut	4	33	5.7	54.2	54.2	.625	33.82	33.82
N. J., N. Y., and Pa	8	38	5.9	53.8	49.1	.686	36.94	33.68
Total	12	71	5.8	54.0	51.5	.657	35.49	33.84
Pattern makers, male: Ill., Ohio, and Wis	3	6	5.5	51.7	49.0	.812	41.94	39.79
Molders, male: N. J., N. Y., and Pa	4	32	5.0	47.7	53.8	.769	36.72	41.37
Melters, furnace men, and crucible men, male: N. J., N. Y., and Pa	3	3	5.0	48.6	55.4	.532	25.83	29.47
Inspectors, male:								
Connecticut	4	66	5.8	50.5	51.6	.492	24.84	25.39
N. J., N. Y., and Pa	6	58	5.8	52.1	51.6	.561	29.24	28.95
Ill., Ohio, and Wis	7	18	5.8	54.9	50.0	.536	29.43	26.80
Total	17	142	5.8	51.7	51.4	.526	27.22	27.04

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Contd.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Inspectors, female:								
Connecticut	4	206	5.6	48.7	52.6	$0.369	$17.94	$19.41
N. J., N. Y., and Pa	6	26	5.2	43.9	50.7	.295	12.96	14.96
Ill., Ohio, and Wis	3	11	5.3	46.0	51.2	.335	15.42	17.15
Total	13	243	5.5	48.0	52.4	.360	17.30	18.86
Wrappers, male: N. J., N. Y., and Pa	5	19	5.5	49.0	50.7	.302	14.79	15.31
Wrappers, female:								
N. J., N. Y., and Pa	8	63	5.7	48.7	50.4	.344	16.75	17.34
Ill., Ohio, and Wis	11	128	5.5	47.1	49.7	.307	14.48	15.26
Total	19	191	5.5	47.7	50.0	.320	15.23	16.00
Packers and craters, male:								
Connecticut	4	63	5.7	50.9	51.8	.461	23.45	23.88
N. J., N. Y., and Pa	13	67	5.4	48.4	51.1	.486	23.50	24.83
Ill., Ohio, and Wis	14	96	5.7	51.8	51.3	.464	24.01	23.80
Total	31	226	5.6	50.5	51.4	.469	23.70	24.11
Packers and craters, female:								
N. J., N. Y., and Pa	5	20	5.3	48.5	53.3	.301	14.59	16.04
Ill., Ohio, and Wis	4	19	5.6	45.5	49.6	.332	15.11	16.47
Total	9	39	5.4	47.1	51.5	.315	14.84	16.22
Laborers, male:								
Connecticut	4	511	5.6	51.6	53.7	.444	22.88	23.84
N. J., N. Y., and Pa	13	122	5.6	50.3	51.5	.460	23.16	23.69
Ill., Ohio, and Wis	14	168	5.4	48.0	51.1	.434	20.82	22.18
Total	31	801	5.5	50.6	52.9	.444	22.49	23.49
Laborers, female:								
N. J., N. Y., and Pa	4	26	5.8	50.3	49.0	.324	16.28	15.88
Ill., Ohio, and Wis	9	169	5.3	44.3	50.0	.290	12.83	14.50
Total	13	195	5.4	45.1	49.8	.295	13.29	14.69
Other employees, male:								
Connecticut	4	796	5.6	51.3	53.1	.567	29.13	30.11
N. J., N. Y., and Pa	13	469	5.7	50.8	52.2	.578	29.34	30.17
Ill., Ohio, and Wis	15	305	5.6	49.3	50.3	.581	28.68	29.22
Total	32	1,570	5.6	50.8	52.3	.573	29.11	29.97
Other employees, female:								
Connecticut	4	754	5.6	50.2	53.6	.377	18.95	20.21
N. J., N. Y., and Pa	8	103	5.7	48.3	49.9	.359	17.33	17.91
Ill., Ohio, and Wis	6	38	5.6	46.4	50.5	.325	15.10	16.41
Total	18	895	5.6	49.8	53.0	.373	18.60	19.77
All employees, male:								
Connecticut	4	2,463	5.6	51.2	53.1	.560	28.65	29.74
N. J., N. Y., and Pa	13	1,647	5.7	50.6	51.7	.620	31.35	32.05
Ill., Ohio, and Wis	15	1,346	5.5	49.0	51.1	.566	27.75	28.92
Total	32	5,456	5.6	50.5	52.2	.579	29.24	30.22
All employees, female:								
Connecticut	4	1,612	5.6	50.4	53.6	.370	18.62	19.83
N. J., N. Y., and Pa	8	269	5.6	48.1	50.4	.337	16.19	16.98
Ill., Ohio, and Wis	11	474	5.3	45.2	50.1	.313	14.13	15.68
Total	23	2,355	5.6	49.1	52.6	.355	17.44	18.67
All employees, male and female:								
Connecticut	4	4,075	5.6	50.9	53.3	.485	24.68	25.85
N. J., N. Y., and Pa	13	1,916	5.6	50.2	51.5	.582	29.22	29.97
Ill., Ohio, and Wis	15	1,820	5.5	48.0	50.8	.504	24.21	25.60
Total	32	7,811	5.6	50.0	52.3	.513	25.68	26.83

Wages and Hours of Labor in Brass and Copper Sheet, Rod, Tube, Wire and Shape Mills, 1927

THIS article relates to the wages and hours of labor of employees in mills making brass or copper sheets, rods, tubes, wire, and shapes.

All data were gathered by agents of the bureau from the records of the manufacturing establishments and are based on one representative pay-roll period. The length of pay-roll periods varies among the establishments. In order to present the data for periods longer than one week on the same basis as those of one week, the earnings of the period were divided by the hours worked in that time, thus obtaining the rate of earnings per hour. This rate was then multiplied by the hours worked in one week to get the earnings for one week.

This study includes data from a greater percentage of the establishments and employees in the industry than is usually taken in wage studies. In some States the entire industry is included. Unfortunately, with one exception, each State has so few establishments as to preclude showing the data by States, as to do so would reveal the identities of some establishments. To avoid this, the establishments in several States have been grouped. It is no secret that the brass industry is centered in Connecticut, and as a number of establishments of considerable size are located there, figures for that State are shown separately. Since some occupations have too few employees to be shown without identifying the establishments, such employees are included in "Other employees."

Both male and female employees are found in some occupations, but in only one (inspectors) can figures be shown for the women. In the other cases, where the woman workers are too few to be shown separately, they are shown only in "Other employees, female." The report does not cover executives nor employees in the following departments: Clerical, either office or factory; power house; engineering, drafting, or experimental; construction and maintenance of buildings; transportation of material to and from the plants; nor watchmen and gatemen.

The occupations tabulated, with their definitions, follow, arranged as nearly as may be in sequence of operation:

Pot casters: The mill receives the metals in the form of pure copper, zinc, or other metal ingots, or as slabs of pure copper. Most mills making copper sheet do not cast their copper slabs but buy them from some concern making a specialty of casting them. If brass or bronze is to be made, the proper amounts of copper and of alloy are weighed out to the caster, who is responsible for seeing that the mixed metal is placed in the pot as it comes to him, that the proper heat is applied, and that the metal is properly stirred and skimmed. He decides the proper time to remove the pots from the furnaces, and pours the metal into the mold. The castings which are to be rolled into sheets are called slabs. The ones which are to be made into tubes, rods, or wire are called billets (short billets are sometimes called bolts). Billets are cast round in various diameters and lengths. Sometimes a core is placed in the mold, and the resultant hollow casting is called a shell. The molds are cast iron and are usually purchased from an outside iron foundry.

Pot tenders: Assist the pot caster by tending fires, stirring the metal, and lifting the pots from the furnaces by hand cranes, carrying them along the line of molds into position for the caster to pour; remove the billets from the molds; clean the molds afterwards; and grease the molds before pouring.

Electric-furnace casters: Perform similar duties to the pot casters but use electrically heated furnaces. The furnaces are moved to the molds by electric cranes.

Electric-furnace tenders: Assist the casters in placing the metal in the furnaces, in preparing the molds, and in removing the billets therefrom.

Gate shear and saw operators: Use power shears or hack saws to remove the rough gate sprues from the billet. To eliminate as much gate wastage as possible, the casting is made several times as long as wanted and then sawed into proper lengths.

Scrap separators: Sort scrap of pure metal or different alloys into piles or boxes. Clean scrap is remelted, while dirty scrap is sent to the crusher. (See Crusher and washer operators.)

Scrap winders and cabbage-machine operators: Wind into bundles on winding machines the scrap from trimming long sheets and scrap wire. Place irregular and short pieces in an iron container under a press where it is pressed into bundles. These bundles are called "cabbages" and the machine a cabbage machine.

Core makers: Make cores around which hollow shells are cast.

Crusher and washer operators: Run through a crusher, scrap containing considerable amounts of dirt, sweepings, etc., and then wash the scrap to remove the impurities. It can then generally be recast after being analyzed for its content, although some scrap is too dirty to clean and must be sold as junk outside the mill.

Rollers, breakdown: Take the slab as it comes from the caster and supervise the first rolling operation. The first rolling often reduces the slab one-half in thickness which goes mostly into the length. Several passes are usually made through the breakdown roll. Copper is rolled hot and brass cold.

Rollers, running-down: Take the rolled slab from the breakdown rolls and pass it several times through rolls somewhat truer and more finely adjusted, reducing the thickness by one-fourth to one-half, and extending the length.

Rollers, finishing: Take the partially completed sheet and pass it through a set of rolls adjusted to make the thickness of the sheet. The reductions here are by easier stages, the last rolling often being a very few thousandths of an inch.

Stickers, blockers, and rollers' helpers: Assist the rollers.

Stickers: Insert the end of the slab, the partially rolled slab, or the partially rolled sheet between the rolls.

Blockers: Receive the slab or sheet from the rolls on the opposite side of the machine from the sticker.

Rollers' helpers: Assist in getting the work to, through, and away from the rolling machine.

Annealers: Take partially worked metal (sheets, rods, wire, or tubes) and pass it through high-temperature furnaces and afterwards allow it to cool slowly, thus preventing hard spots, strains, and breaking in the further working.

Annealers' helpers: Assist the annealer in maintaining the temperature and in loading and unloading the furnaces.

Overhaulers or scalpers: Operate machines which clean the surface of the slab after several rollings. This leaves clean bright surfaces for the next roller. One type of machine works on the planer principle and another type on the principle of the revolving milling cutter. Bars intended for rods or tubes are scalped on a lathelike machine.

Picklers: Immerse the metal before the last rolling or drawing operation in a chemical bath to remove grease and dirt. They are assisted by laborers.

Slitters, shearers, and sawyers: Slitters trim the rough edges from the sheet. Shearers trim the ends on a squaring shear. Sawyers cut wide sheets into strips, using either a single or a gang saw.

Inspectors: Examine the product at several stages for flaws in metal and imperfections in workmanship.

Crane operators: Operate overhead electric cranes to move material from place to place.

Crane followers: Direct by signals the raising, lowering, and movement of the load by the crane operator; also assist in fastening the sling to the load.

Polishers: Use rapidly revolving cloth wheels and fine abrasive (rouge) to give a bright, clean surface. Some polishing of sheets is done on a flat table by hand.

Circling-machine operators: Place a square sheet in a machine which revolves it horizontally under a rotating cutter. A flat disk results.

Tinners (not wire tinners): Cover the surface of some of the product with tin. The tinner uses a ladle and pours the molten tin over the sheet. The surplus tin is wiped off by a laborer with handfuls of tow. Rods and tubes, if tinned, are dipped into the tank of molten tin and afterwards wiped. Sometimes the ends of tubes are plugged to keep the tin from the inside.

Weighers: Weigh the product, which is practically all sold by weight, and keep the scale records.

Packers and markers: Packers place the product in boxes or crates. The boxes are then closed by nailers (see Laborers). Markers put address, etc., on the boxes for shipment. Packing and marking are frequently done by the same employee.

Extrusion operators: Put a hot billet in a machine which forces it through dies to form desired long shapes or rods.

Heaters: Place billet, rod, etc., in the furnace and heat it to the proper degree, which they judge mostly from the color. When the billet or rod is hot enough the heater passes it to the machine operator.

Brass-rod rollers (cold): Pass the brass billet through rolls which reduce the diameter and increase the length. First rolling (breakdown) lessens the diameter more than subsequent rolling; finish rolling is to very close measure.

Hand straighteners: Use wooden mallets to strike and straighten various extruded or press shapes. In the tube department a similar operation is performed by placing the tube between wooden blocks, one of which acts as a fulcrum and then applying hand strength in the proper direction.

Bull-block operators: Operate a very powerful machine to break down or draw and reduce size of a rod as the first operation toward drawing wire.

Wire drawers, coarse and fine: Insert the reduced end of the broken-down rod through dies, secure the end, and start the machine which draws the metal through the die. Sometimes a single die is used, and sometimes a number of dies are used in a train.

Die makers: Make dies through which the metal is drawn, pressed, or extruded, or for hot-press work.

Piercing-machine operators: Do the first operation toward seamless tube. Take the red-hot billet from the heater and place it in a machine having a set of rollers which force the billet along and around the outside of a long steel mandrel, forming a tube from a solid. The mandrel is immediately withdrawn and the rough tube removed from the machine by helpers and allowed to cool before going to the draw bench.

Piercing-machine helpers: Assist the operator in placing the billet in the machine and by handling the mandrel and removing the roughly formed tube from the machine.

Pointers: Place the end of the rough tube or rod in a machine which, by a hammering or a rolling motion, reduces the end to a size which will enter and extend beyond the die, where it is gripped by the drawing tong.

Draw-bench operators: Insert the pointed tube through the die and secure the point in the tongs; place a plug inside the tube, and draw the tube through the die and over the plug, the plug maintaining the inside diameter of the tube. Rods are sometimes pointed and drawn in the same manner without, of course, the use of the plug.

Forming-machine operators, brazed tube: Place a strip of metal into a machine which turns and rolls the edges up roughly into tube form. An automatic hammer attachment brings the two edges together in a seam which is afterwards brazed.

Brazers: Fill the seams along the tube with hard solder and pass the tubes through a furnace which fuses the hard solder with the edges of the seam. The tubes are then pointed and drawn, in the same manner as seamless tubes.

Air and water testers: Fill the tubes with air or water under pressure to detect leaks.

Laborers: This occupation includes picklers' helpers, overhaulers' helpers, slitters' helpers, nailers, scrap handlers, hand truckers, tinners' wipers, helpers on draw benches, pointers' helpers, brazers' laborers, extrusion helpers, rod-rollers' helpers, hot-press helpers, yardmen, rolling-barrel operators or tumblers, dry-out men, insulating-tank men, etc.

Other employees: Machine straighteners, wire straighteners (coil), oilers, motor truckers or jitney operators, cutters of tube and rod to length, sweepers, machinists, machine repairers, blacksmiths, box and barrel makers, saw filers, millwrights, working subforemen, etc.

Overtime Pay and Bonuses

OF THE 20 establishments covered in this study, 14 reported some form of extra pay for overtime.

Of the 14 establishments, 5 paid time and a half and 1 paid time and a third after normal daily hours. One plant paid time and a half after normal daily hours to day workers and time and a half after 11 hours to night workers. One paid time and a half after normal daily hours to maintenance crew only. One paid time and a third after 10 hours per day, one after 50 hours per week, one after 55 hours per week, and one after 48 hours per week (except to casters and tenders). One establishment paid time and a half after 8 p. m. and on Sunday, and one after 50 hours per week to productive employees and after 48 hours to employees in the mechanical department.

Thirteen establishments reported bonus systems, all of which were based on production. These bonus systems were based on some arbitrary standard which is usually set by time studies of the various occupations. The efficiency standard or minimum acceptable production varies in each establishment, as does also the scale or rate. This scale or rate is usually graduated, beginning at the minimum standard of efficiency and gradually increasing as the production increases.

Statistics of Wages and Hours

DATA as to the full-time and actual working hours and the full-time and actual earnings in these plants, by occupations, are shown below:

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Pot casters, male:								
Connecticut	4	14	4.5	37.9	48.4	$1.025	$38.87	$49.61
Mass., N. J., N. Y., and Pa	4	45	5.9	37.1	36.7	.917	33.99	33.65
Ill., Mich., and Wis	4	9	4.4	38.1	45.8	.946	36.05	43.33
Total	12	68	5.4	37.4	40.3	.943	35.26	38.00
Pot tenders, male:								
Connecticut	3	32	4.3	38.8	48.2	.676	26.21	32.58
Mass., N. J., N. Y., and Pa	4	47	5.6	35.7	37.2	.772	27.58	28.72
Ill., Mich., and Wis	4	19	4.7	38.5	45.8	.856	32.99	39.20
Total	11	98	5.0	37.3	42.4	.756	28.18	32.05
Electric-furnace casters, male:								
Connecticut	5	177	5.4	44.3	49.3	.845	37.42	41.66
Mass., N. J., N. Y., and Pa	4	88	5.7	45.7	48.0	.878	40.16	42.14
Ill., Mich., and Wis	5	150	5.3	46.4	48.6	.794	36.83	38.59
Total	14	415	5.4	45.3	48.8	.833	37.79	40.65
Electric-furnace tenders, male:								
Connecticut	5	219	5.6	45.6	49.5	.860	39.17	42.57
Mass., N. J., N. Y., and Pa	4	52	5.3	43.1	48.0	.593	25.59	28.46
Ill., Mich., and Wis	4	34	5.0	44.0	50.0	.744	32.76	37.20
Total	13	305	5.5	45.0	49.3	.804	36.14	39.64
Gate shear and saw operators, male:								
Connecticut	5	31	5.4	49.5	54.2	.602	29.80	32.63
Mass., N. J., N. Y., and Pa	6	23	5.6	56.0	52.0	.544	30.47	28.29
Ill., Mich., and Wis	5	29	5.3	50.8	56.0	.521	26.44	29.18
Total	16	83	5.4	51.7	54.2	.557	28.81	30.19

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Con.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Scrap separators, male:								
Connecticut	5	35	5.5	49.8	54.9	$0.486	$24.23	$26.68
Mass., N. J., N. Y., and Pa	5	34	5.6	49.8	51.3	.468	23.32	24.01
Ill., Mich., and Wis	3	7	5.0	47.1	55.0	.464	21.82	25.52
Total	13	76	5.5	49.6	53.3	.476	23.60	25.37
Scrap winders and cabbage-machine operators, male:								
Connecticut	5	34	5.5	50.7	54.6	.548	27.79	29.92
Mass., N. J., N. Y., and Pa	5	25	5.7	57.8	51.2	.494	28.59	25.29
Ill., Mich., and Wis	5	27	5.2	49.2	55.6	.545	26.79	30.30
Total	15	86	5.5	52.3	53.9	.530	27.71	28.57
Core makers, male: Connecticut	4	25	5.7	56.3	57.0	.678	38.20	38.65
Crusher and washer operators, male								
Connecticut	3	9	5.1	45.5	54.4	.449	20.44	24.43
Ill., Mich., and Wis	3	7	6.0	57.6	55.1	.522	30.07	28.76
Total	6	16	5.5	50.8	54.8	.485	24.65	26.58
Rollers, breakdown, male:								
Connecticut	5	18	5.6	51.1	54.2	.735	37.54	39.84
Mass., N. J., N. Y., and Pa	7	33	5.5	56.1	54.0	.721	40.44	38.93
Ill., Mich., and Wis	5	24	5.1	51.9	55.9	.760	39.39	42.48
Total	17	75	5.4	53.5	54.7	.736	39.41	40.26
Rollers, running-down, male:								
Connecticut	5	26	5.7	50.8	54.2	.698	35.43	37.83
Mass., N. J., N. Y., and Pa	7	36	5.8	53.7	51.5	.697	37.43	35.90
Ill., Mich., and Wis	5	33	5.3	50.2	54.8	.656	32.95	35.95
Total	17	95	5.6	51.7	53.4	.683	35.33	36.47
Rollers, finishing, male:								
Connecticut	5	76	5.5	50.1	54.4	.802	40.20	43.63
Mass., N. J., N. Y., and Pa	7	98	5.5	50.2	52.8	.680	34.11	35.90
Ill., Mich., and Wis	5	97	5.3	50.6	54.7	.719	36.42	39.33
Total	17	271	5.4	50.3	53.9	.728	36.65	39.24
Stickers, male:								
Connecticut	5	126	5.5	50.7	54.7	.551	27.95	30.14
Mass., N. J., N. Y., and Pa	7	151	5.5	50.8	52.9	.549	27.90	29.04
Ill., Mich., and Wis	5	114	5.3	51.0	55.0	.555	28.29	30.53
Total	17	391	5.4	50.8	54.1	.551	28.03	29.81
Blockers, male:								
Connecticut	5	127	5.4	50.3	54.6	.551	27.73	30.08
Mass., N. J., N. Y., and Pa	7	151	5.5	51.0	53.0	.540	27.56	28.62
Ill., Mich., and Wis	5	111	5.1	49.4	55.2	.537	26.52	29.64
Total	17	389	5.4	50.3	54.2	.543	27.32	29.43
Rollers' helpers, male:								
Connecticut	5	133	5.4	49.2	54.4	.527	25.88	28.67
Mass., N. J., N. Y., and Pa	7	217	5.4	50.5	53.2	.483	24.38	25.70
Ill., Mich., and Wis	5	208	5.3	51.9	54.7	.522	27.12	28.55
Total	17	558	5.4	50.7	54.1	.508	25.76	27.48
Annealers, male:								
Connecticut	5	106	5.7	58.8	59.5	.607	35.68	36.12
Mass., N. J., N. Y., and Pa	8	90	5.6	57.1	55.0	.538	30.72	29.59
Ill., Mich., and Wis	7	82	5.2	54.2	60.4	.551	29.86	33.28
Total	20	278	5.5	56.9	58.3	.569	32.36	33.17
Annealers' helpers, male:								
Connecticut	5	93	5.6	54.0	57.5	.541	29.22	31.11
Mass., N. J., N. Y., and Pa	8	130	5.4	53.6	54.7	.451	24.20	24.67
Ill., Mich., and Wis	7	81	5.1	55.3	61.3	.472	26.10	28.93
Total	20	304	5.4	54.2	57.3	.484	26.24	27.73

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Con.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Overhaulers or scalpers, male:								
Connecticut	5	56	5.3	49.0	54.5	$0.548	$26.84	$29.87
Mass., N. J., N. Y., and Pa	4	41	5.1	45.9	51.5	.559	25.64	28.79
Ill., Mich., and Wis	5	32	5.6	51.2	55.1	.516	26.42	28.43
Total	14	129	5.3	48.6	53.7	.543	26.36	29.16
Picklers, male:								
Connecticut	5	107	5.5	51.6	54.4	.563	29.05	30.63
Mass., N. J., N. Y., and Pa	8	80	5.7	51.3	51.5	.511	26.18	26.32
Ill., Mich., and Wis	6	69	5.1	48.7	55.0	.483	23.52	26.57
Total	19	256	5.5	50.7	53.7	.526	26.66	28.25
Slitters, shearers, and sawyers, male:								
Connecticut	5	75	5.6	52.7	54.9	.543	28.61	29.81
Mass., N. J., N. Y., and Pa	7	159	5.5	51.2	52.1	.511	26.14	26.62
Ill., Mich., and Wis	5	134	5.5	52.3	54.8	.505	26.44	27.67
Total	17	368	5.5	51.9	53.7	.515	26.75	27.66
Inspectors, male:								
Connecticut	5	155	5.6	52.7	54.5	.532	27.99	28.99
Mass., N. J., N. Y., and Pa	6	144	5.6	54.4	53.1	.508	27.60	26.97
Ill., Mich., and Wis	6	142	5.4	49.5	55.0	.491	24.27	27.01
Total	17	441	5.5	52.2	54.2	.511	26.67	27.70
Inspectors, female:								
Connecticut	3	17	5.5	51.3	55.0	.348	17.84	19.14
Ill., Mich., and Wis	4	20	5.5	47.9	54.6	.290	13.90	15.83
Total	7	37	5.5	49.5	54.8	.318	15.71	17.43
Crane operators, male:								
Connecticut	5	182	5.6	52.2	54.0	.568	29.64	30.67
Mass., N. J., N. Y., and Pa	6	98	5.6	56.4	54.3	.563	31.75	30.57
Ill., Mich., and Wis	5	96	5.2	51.0	56.1	.544	27.71	30.52
Total	16	376	5.5	53.0	54.6	.561	29.70	30.63
Crane followers, male:								
Connecticut	4	75	5.5	52.4	54.6	.540	28.30	29.48
Mass., N. J., N. Y., and Pa	3	55	5.6	53.9	53.3	.490	26.39	26.12
Ill., Mich., and Wis	4	70	5.2	49.8	53.3	.493	24.57	26.28
Total	11	200	5.4	51.9	53.8	.510	26.47	27.44
Polishers, male: Mass., N. J., N. Y., and Pa	6	48	5.6	54.8	53.6	.590	32.37	31.62
Circling-machine operators, male: Mass., N. J., N. Y., and Pa	3	6	5.8	56.0	53.3	.505	28.29	26.92
Tinners (not wire), male:								
Connecticut	3	4	6.0	61.8	52.5	.573	35.39	30.08
Mass., N. J., N. Y., and Pa	5	24	5.4	48.9	52.1	.584	28.55	30.43
Total	8	28	5.5	50.7	52.2	.582	29.53	30.38
Weighers, male:								
Connecticut	5	110	5.6	52.9	53.9	.567	30.00	30.56
Mass., N. J., N. Y., and Pa	7	31	5.8	53.7	52.2	.523	28.08	27.30
Ill., Mich., and Wis	7	50	5.4	49.8	55.4	.537	26.75	29.75
Total	19	191	5.6	52.2	54.0	.552	28.83	29.81
Packers and markers, male:								
Connecticut	5	80	5.7	53.3	54.2	.530	28.26	28.73
Mass., N. J., N. Y., and Pa	8	67	5.7	49.8	51.1	.469	23.34	23.97
Ill., Mich., and Wis	6	43	5.5	51.2	55.4	.476	24.38	26.37
Total	19	190	5.7	51.6	53.4	.497	25.65	26.54
Extrusion operators, male:								
Connecticut	5	17	5.4	50.2	54.4	.671	33.72	36.50
Ill., Mich., and Wis	3	6	5.3	50.2	55.9	.635	31.87	35.50
Total	8	23	5.3	50.2	54.8	.662	33.23	36.28

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Con.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Heaters, male:								
Connecticut	5	23	5.4	52.9	56.3	$0.617	$32.65	$34.74
Mass., N. J., N. Y., and Pa.	3	4	5.3	51.9	50.0	.555	28.81	27.75
Ill., Mich., and Wis.	3	15	5.1	51.3	57.2	.592	30.39	33.86
Total	11	42	5.3	52.2	56.0	.602	31.47	33.71
Brass-rod rollers (cold), male:								
Connecticut	4	34	5.1	49.0	55.0	.548	26.84	30.14
Ill., Mich., and Wis.	3	6	5.3	47.1	55.1	.575	27.10	31.68
Total	7	40	5.2	48.7	55.0	.552	26.88	30.36
Hand straighteners, male:								
Connecticut	3	19	5.7	58.1	54.2	.548	31.85	29.70
Ill., Mich., and Wis.	4	25	5.7	52.1	55.1	.517	26.90	28.49
Total	7	44	5.7	54.7	54.7	.531	29.04	29.04
Bull-block operators, male:								
Connecticut	5	36	5.6	50.1	53.9	.588	29.46	31.69
Ill., Mich., and Wis.	3	15	4.9	46.5	56.4	.542	25.18	30.57
Total	8	51	5.4	49.0	54.6	.575	28.20	31.40
Wire drawers, coarse and fine, male:								
Connecticut	5	216	5.5	52.4	55.0	.577	30.25	31.74
Ill., Mich., and Wis.	3	73	3.8	35.4	56.2	.566	20.04	31.81
Total	8	289	5.0	48.1	55.2	.575	27.68	31.74
Die makers, male:								
Connecticut	5	40	6.0	53.8	54.0	.627	33.71	33.86
Ill., Mich., and Wis.	5	44	5.6	54.2	55.5	.685	37.17	38.02
Total	10	84	5.8	54.0	54.8	.658	35.52	36.06
Piercing-machine operators, male:								
Connecticut	4	5	5.6	55.5	55.0	.753	41.76	41.42
Piercing-machine helpers, male:								
Connecticut	4	18	5.6	55.3	56.1	.543	30.03	30.46
Pointers, male:								
Connecticut	5	97	5.2	50.8	54.9	.544	27.67	29.87
Mass., N. J., N. Y., and Pa.	3	55	5.1	48.6	52.1	.509	24.75	26.52
Ill., Mich., and Wis.	5	47	5.1	50.6	56.0	.485	24.52	27.16
Total	13	199	5.2	50.2	54.4	.521	26.12	28.34
Draw-bench operators, male:								
Connecticut	5	182	5.5	53.4	54.6	.565	30.15	30.85
Mass., N. J., N. Y., and Pa.	3	118	5.3	46.6	50.5	.504	23.50	25.45
Ill., Mich., and Wis.	6	103	5.2	51.4	56.3	.502	25.83	28.26
Total	14	403	5.3	50.9	53.8	.533	27.10	28.68
Forming-machine operators, brazed tube, male: Ill., Mich., and Wis.	3	17	5.9	53.9	51.1	.590	31.81	30.15
Brazers, male: Connecticut	3	10	5.7	53.0	55.0	.596	31.60	32.78
Air and water testers, male:								
Connecticut	4	8	5.3	56.1	55.6	.541	30.32	30.08
Mass., N. J., N. Y., and Pa.	3	9	5.8	49.3	47.8	.453	22.34	21.65
Ill., Mich., and Wis.	3	7	5.4	54.5	56.5	.480	26.16	27.12
Total	10	24	5.5	53.1	52.9	.492	26.12	26.03
Laborers, male:								
Connecticut	5	1,383	5.5	52.2	54.7	.499	26.07	27.30
Mass., N. J., N. Y., and Pa.	8	1,202	5.4	50.0	52.0	.459	22.95	23.87
Ill., Mich., and Wis.	7	710	5.3	49.6	55.3	.483	23.94	26.71
Total	20	3,295	5.4	50.8	53.9	.481	24.47	25.93

WAGES AND HOURS OF LABOR, 1927, BY OCCUPATION, SEX, AND LOCALITY—Con.

Occupation, sex, and locality	Number of—		Average number of days on which employees worked in one week	Average hours		Average earnings		
	Establishments	Employees		Actually worked in one week	Full-time per week	Per hour	Actual in one week	Full-time per week
Laborers, female: Ill., Mich., and Wis	1	5	6.0	53.8	54.0	$0.300	$16.14	$16.20
Other employees, male:								
Connecticut	5	1,675	5.7	53.3	54.6	.599	31.93	32.71
Mass., N. J., N. Y., and Pa	8	652	5.5	50.2	51.5	.554	27.82	28.53
Ill., Mich., and Wis	7	739	5.4	51.9	55.7	.570	29.57	31.75
Total	20	3,066	5.6	52.3	54.2	.583	30.49	31.60
Other employees, female:								
Connecticut	2	180	5.6	51.7	55.0	.354	18.30	19.47
Mass., N. J., N. Y., and Pa	1	12	5.6	47.0	50.0	.336	15.81	16.80
Ill., Mich., and Wis	2	29	4.9	41.5	54.5	.364	15.08	19.84
Total	5	221	5.5	50.1	54.7	.354	17.74	19.36
All employees, male:								
Connecticut	5	5,888	5.5	51.9	54.4	.580	30.09	31.55
Mass., N. J., N. Y., and Pa	8	4,013	5.5	50.5	51.8	.525	26.50	27.20
Ill., Mich., and Wis	7	3,475	5.3	50.3	55.2	.549	27.61	30.30
Total	20	13,376	5.5	51.1	53.8	.556	28.37	29.91
All employees, female:								
Connecticut	3	197	5.5	51.6	55.0	.354	18.26	19.47
Mass., N. J., N. Y., and Pa	1	12	5.6	47.0	50.0	.336	15.81	16.80
Ill., Mich., and Wis	4	54	5.2	45.0	54.5	.328	14.74	17.88
Total	8	263	5.5	50.1	54.7	.348	17.43	19.04
All employees, male and female:								
Connecticut	5	6,085	5.5	51.9	54.4	.572	29.71	31.12
Mass., N. J., N. Y., and Pa	8	4,025	5.5	50.4	51.8	.525	26.47	27.20
Ill., Mich., and Wis	7	3,529	5.3	50.2	55.2	.546	27.41	30.14
Total	20	13,639	5.5	51.0	53.8	.552	28.16	29.70

Six-Day Week in the California Oil Industry

ON JUNE 18, 1928, a conference of oil operators was held in San Francisco under the auspices of the California Department of Industrial Relations to consider the substitution of the six-day for the seven-day week in the oil industry. According to a statement from the department of industrial relations, favorable responses were received from the following companies: Standard Oil Co., Union Oil Co., General Petroleum Corporation, The Texas Co., Barnsdall Oil Co., Honolulu Consolidated Oil Co., and Charles A. Son & Co. Practically all of these companies announced that there would be no reduction in the workers' pay. The Associated Oil Co. stated that it is considering the question, and it is reported that other oil companies have decided to operate on the six-day week basis for all of their employees.

It is said that no opposition was voiced by those present at the conference or in letters sent to the department of industrial relations.

Approximately 20,000 workers will be affected by the change.

On January 1, 1917, the Standard Oil Co. adopted the six-day week for all of its employees except the drilling crews. On April 15, 1928, the six-day week was extended to the drilling crews, without reduction in pay.

TREND OF EMPLOYMENT

Employment in Selected Manufacturing Industries in June, 1928

BOTH employment and pay-roll totals were slightly greater in June, 1928, than in May, the increase in each instance being 0.1 per cent. This is the first time in five years that employment has not fallen off in June and is the first time in six years that pay-roll totals have not decreased in that month.

The Bureau of Labor Statistics' weighted index of employment for June, 1928, is 85.6, as compared with 85.5 for May, 1928, 85.7 for April, 1928, and 89.1 for June, 1927; the weighted index of pay-roll totals for June, 1928, is 90.2, as compared with 90.1 for May, 1928, 89.9 for April, 1928, and 93.3 for June, 1927.

Employment in June, 1928, was 3.9 per cent below the level of employment in June, 1927, and pay-roll totals were 3.3 per cent smaller. The decreases in both these items, comparing 1928 with 1927, were considerably less in June, 1928, than in any previous month of 1928.

The data for June, 1928, were based on returns made by 11,231 establishments in 54 of the principal manufacturing industries of the United States. These establishments in June had 3,091,921 employees whose combined earnings in one week were $83,523,193.

Comparison of Employment and Pay-roll Totals in May and June, 1928

TWENTY-NINE of the 54 separate industries had more employees in June, 1928, than in May, and 28 industries reported increased pay-roll totals. The usual seasonal increases in employment appeared in slaughtering and meat packing, ice cream, men's clothing, cement, brick, and cigars and cigarettes.

Petroleum refining after more than a year of declining employment showed a gain of 2.3 per cent; automobile tires reported a belated increase of 2.6 per cent; carriages and wagons showed an unusual gain of over 5 per cent; the machine-tool industry continued this year's steady upward trend; and woolen goods reported a gain of 1.7 per cent.

The outstanding losses in employment were seasonal decreases in fertilizers, rubber boots and shoes, women's clothing, and millinery and lace goods. Cotton goods, hosiery, silk goods, iron and steel, furniture, book and job printing, and electric-car building and repairing each fell off a little less than 1 per cent in employment. The automobile industry in June reported a cessation of the steady and pronounced upward trend of the last six months with a decline of less than one-tenth of 1 per cent in employment and a decrease of over 5 per cent in pay-roll totals. The strike in the cotton-goods mills of one locality, which caused a notable drop in employment in May, was still unsettled in June; therefore the industry had not yet regained its former level of employment.

Seven of the 12 groups of industries showed increased employment in June, the food and lumber groups leading with increases of more

than 1 per cent each, followed by the tobacco and stone-clay-glass groups with increases of slightly less than 1 per cent each, and the iron and steel and vehicle groups with 0.1 per cent each. The textile and nonferrous metals groups each reported decreased employment of 0.6 per cent, the leather and paper groups losses of 0.2 per cent each, while the chemical group had fallen off nearly 2 per cent in employment owing to the ending season in fertilizers.

Six of the nine geographic divisions showed a gain in employment in June as compared with May, these being the four Western groups, the Middle Atlantic, and the East North Central.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN MAY AND JUNE, 1928

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		May, 1928	June, 1928		May, 1928	June, 1928	
Food and kindred products	**1,732**	**217,993**	**221,497**	(1)	**$5,623,154**	**$5,779,084**	(1)
Slaughtering and meat packing	194	83,609	86,438	+3.4	2,165,290	2,277,070	+5.2
Confectionery	308	31,841	31,359	−1.5	594,282	600,469	+1.0
Ice cream	240	10,013	10,771	+7.6	336,435	362,293	+7.7
Flour	321	14,194	13,885	−2.2	379,052	371,632	−2.0
Baking	653	68,190	69,077	+1.3	1,845,884	1,868,124	+1.2
Sugar refining, cane	16	10,146	9,967	−1.8	302,211	299,496	−0.9
Textiles and their products	**1,868**	**567,681**	**565,545**	(1)	**10,813,279**	**10,824,720**	(1)
Cotton goods	477	212,179	210,543	−0.8	3,180,951	3,112,870	−2.1
Hosiery and knit goods	233	77,053	76,416	−0.8	1,466,866	1,461,844	−0.3
Silk goods	189	54,615	54,147	−0.9	1,154,497	1,158,732	+0.4
Woolen and worsted goods	183	59,803	60,804	+1.7	1,333,258	1,351,032	+1.3
Carpets and rugs	30	23,641	22,842	−3.4	583,828	545,227	−6.6
Dyeing and finishing textiles	97	29,177	28,588	−2.0	718,026	684,921	−4.6
Clothing, men's	291	58,525	61,872	+5.7	1,285,562	1,476,570	+14.9
Shirts and collars	97	19,093	18,584	−2.7	307,766	298,629	−3.0
Clothing, women's	200	22,130	21,008	−5.1	521,846	488,040	−6.5
Millinery and lace goods	71	11,465	10,741	−6.3	260,679	246,855	−5.3
Iron and steel and their products	**1,801**	**651,759**	**652,289**	(1)	**19,936,645**	**19,748,769**	(1)
Iron and steel	194	263,452	261,302	−0.8	8,413,329	8,104,362	−3.7
Cast-iron pipe	39	12,243	12,283	+0.3	289,783	267,974	−7.5
Structural ironwork	163	25,337	26,045	+2.8	776,991	791,065	+1.8
Foundry and machine shop products	968	237,474	238,643	+0.5	7,172,944	7,268,951	+1.3
Hardware	68	30,309	30,532	+0.7	749,898	764,928	+2.0
Machine tools	148	29,998	30,514	+1.7	979,031	1,000,814	+2.2
Steam fittings and steam and hot-water heating apparatus	106	33,588	33,445	−0.4	1,006,103	999,437	−0.7
Stoves	115	19,358	19,525	+0.9	548,566	551,238	+0.5
Lumber and its products	**1,142**	**211,714**	**213,848**	(1)	**4,703,381**	**4,746,575**	(1)
Lumber, sawmills	453	121,041	123,241	+1.8	2,549,079	2,550,859	+0.1
Lumber, millwork	269	32,168	32,453	+0.9	784,257	801,358	+2.2
Furniture	420	58,505	58,154	−0.6	1,370,045	1,394,358	+1.8
Leather and its products	**346**	**111,812**	**111,686**	(1)	**2,391,644**	**2,503,273**	(1)
Leather	132	27,640	27,249	−1.4	683,924	668,035	−2.3
Boots and shoes	214	84,172	84,437	+0.3	1,707,720	1,835,238	+7.5
Paper and printing	**924**	**177,642**	**177,501**	(1)	**5,854,572**	**5,858,517**	(1)
Paper and pulp	214	56,805	57,085	+0.5	1,521,689	1,516,423	−0.3
Paper boxes	188	19,147	19,236	+0.5	429,589	444,090	+3.4
Printing, book and job	309	51,135	50,720	−0.8	1,821,287	1,816,327	−0.3
Printing, newspapers	213	50,555	50,460	−0.2	2,082,007	2,081,677	−(2)
Chemicals and allied products	**354**	**85,082**	**84,131**	(1)	**2,516,987**	**2,511,296**	(1)
Chemicals	122	30,544	30,801	+0.8	856,139	852,817	−0.4
Fertilizers	177	10,615	8,396	−20.9	213,417	175,040	−18.0
Petroleum refining	55	43,923	44,934	+2.3	1,447,431	1,483,439	+2.5
Stone, clay, and glass products	**959**	**123,766**	**124,943**	(1)	**3,240,603**	**3,245,464**	(1)
Cement	106	25,541	26,205	+2.6	763,315	770,539	+0.9
Brick, tile, and terra cotta	662	42,105	42,612	+1.2	1,061,404	1,075,702	+1.3
Pottery	70	14,745	14,810	+0.4	378,131	361,476	−4.4
Glass	121	41,375	41,316	−0.1	1,037,753	1,037,747	−(2)

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN MAY AND JUNE, 1928—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		May, 1928	June, 1928		May, 1928	June, 1928	
Metal products, other than iron and steel	**221**	**51,802**	**51,424**	(1)	**$1,420,231**	**$1,398,339**	(1)
Stamped and enameled ware	69	19,722	19,158	−2.9	484,403	463,458	−4.3
Brass, bronze, and copper products	152	32,080	32,266	+0.6	935,828	934,881	−0.1
Tobacco products	**259**	**61,425**	**61,976**	(1)	**987,119**	**1,053,132**	(1)
Chewing and smoking tobacco and snuff	29	8,285	8,288	+(2)	127,930	134,510	+5.1
Cigars and cigarettes	230	53,140	53,688	+1.0	859,189	918,622	+6.9
Vehicles for land transportation	**1,223**	**575,216**	**575,534**	(1)	**18,994,445**	**18,289,051**	(1)
Automobiles	210	407,148	407,110	−(2)	13,927,595	13,205,564	−5.2
Carriages and wagons	56	1,476	1,552	+5.1	33,462	37,185	+11.1
Car building and repairing, electric-railroad	383	25,137	24,924	−0.8	795,431	776,549	−2.4
Car building and repairing, steam-railroad	574	141,455	141,948	+0.3	4,237,957	4,269,753	+0.8
Miscellaneous industries	**402**	**250,097**	**251,547**	(1)	**7,382,824**	**7,564,973**	(1)
Agricultural implements	81	26,628	26,796	+0.6	806,154	808,430	+0.3
Electrical machinery, apparatus, and supplies	176	118,339	119,927	+1.3	3,520,267	3,621,285	+2.9
Pianos and organs	43	6,938	6,833	−1.5	198,892	195,293	−1.8
Rubber boots and shoes	12	18,219	16,745	−8.1	428,859	400,549	−6.6
Automobile tires	52	56,572	58,070	+2.6	1,747,313	1,838,672	+5.2
Shipbuilding	38	23,401	23,176	−1.0	681,339	700,744	+2.8
All industries	**11,231**	**3,085,989**	**3,091,921**	(1)	**83,864,884**	**83,523,193**	(1)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England	1,355	373,095	369,136	−1.1	$9,000,610	$9,018,193	+0.2
Middle Atlantic	2,643	814,280	815,107	+0.1	23,173,834	23,225,757	+0.2
East North Central	3,024	1,088,274	1,091,791	+0.3	33,517,654	33,034,571	−1.4
West North Central	1,023	157,228	161,208	+2.5	4,035,715	4,171,548	+3.4
South Atlantic	1,287	301,590	301,403	−0.1	5,798,461	5,768,267	−0.5
East South Central	562	116,815	116,387	−0.4	2,233,155	2,201,765	−1.4
West South Central	462	82,875	83,061	+0.2	1,773,861	1,766,648	−0.4
Mountain	198	29,561	30,551	+3.3	831,163	847,921	+2.0
Pacific	677	122,271	123,277	+0.8	3,500,431	3,488,523	−0.3
All divisions	**11,231**	**3,085,989**	**3,091,921**	(1)	**83,864,884**	**83,523,193**	(1)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

TABLE 2.—PER CENTS OF CHANGE, MAY TO JUNE, 1928—12 GROUPS OF INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change, May to June, 1928		Group	Per cent of change, May to June, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	+1.4	+2.5	Metal products, other than iron and steel	−0.6	−1.2
Textiles and their products	−0.6	−0.3	Tobacco products	+0.9	+6.7
Iron and steel and their products	+0.1	−0.9	Vehicles for land transportation	+0.1	−2.3
Lumber and its products	+1.1	+0.7	Miscellaneous industries	+0.2	+2.7
Leather and its products	−0.2	+4.0			
Paper and printing	−0.2	+0.2	**All industries**	**+0.1**	**+0.1**
Chemicals and allied products	−1.9	−1.5			
Stone, clay, and glass products	+0.8	−0.1			

Comparison of Employment and Pay-roll Totals in June, 1928, with June, 1927

THE level of employment in manufacturing industries in June, 1928, was 3.9 per cent lower than in June, 1927, and pay-roll totals were 3.3 per cent lower.

The vehicle group of industries alone of the 12 groups of industries showed increased employment (4.7 per cent) in this 12-month comparison. The same condition existed in May, and was due in both instances to the notably high level of employment in the automobile industry.

The decreases in employment in 10 of the remaining groups ranged from 0.9 per cent in the paper group to 6 per cent in the stone-clay-glass group; the group of miscellaneous industries showed a drop of 11.8 per cent.

The outstanding increases in employment over this 12-month period were 20.5 per cent in the automobile industry, 18.5 per cent in agricultural implements, 6.5 per cent in machine tools, and 4.3 per cent in fertilizers.

The pronounced decreases in June, 1928, as compared with June, 1927, were 24.4 per cent in shipbuilding, 19.4 per cent in cane-sugar refining, 13.4 per cent in pianos, 13 per cent in cotton goods, 12.8 per cent in brick, 12.4 per cent in petroleum refining, and more than 10 per cent both in cast-iron pipe and in steam fittings; the iron and steel industry, slaughtering and meat packing, lumber (both sawmills and millwork), and cigars and cigarettes each showed a drop of approximately 4 per cent.

The East North Central geographic division in June, 1928, showed a gain of 5.2 per cent in employment as compared with June, 1927, but decreased employment was shown in the remaining eight divisions, the range of decreases having been from 0.8 per cent in the West North Central division to 10 per cent in the New England division.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, JUNE, 1928, WITH JUNE, 1927

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, June, 1928, compared with June, 1927	
	Number on pay roll	Amount of pay roll
Food and kindred products	**−4.1**	**−3.2**
Slaughtering and meat packing	−3.6	−2.1
Confectionery	−7.4	−7.3
Ice cream	−3.7	−2.6
Flour	−2.9	−2.5
Baking	−1.8	−1.4
Sugar refining, cane	−19.4	−19.2
Textiles and their products	**−5.8**	**−8.7**
Cotton goods	−13.0	−21.6
Hosiery and knit goods	−5.3	−5.9
Silk goods	−1.6	+1.8
Woolen and worsted goods	−2.7	−3.9
Carpets and rugs	−5.0	−17.0
Dyeing and finishing textiles	−2.8	−4.0
Clothing, men's	−5.7	−8.9
Shirts and collars	−4.4	−7.4
Clothing, women's	+2.6	+1.7
Millinery and lace goods	+2.0	−1.6
Iron and steel and their products	**−2.9**	**−1.2**
Iron and steel	−4.0	−2.8
Cast-iron pipe	−10.3	−17.1
Structural ironwork	−0.6	+1.0
Foundry and machine-shop products	−2.2	+0.2
Hardware	−5.1	−5.2
Machine tools	+6.5	+13.9
Steam fittings and steam and hot-water heating apparatus	−10.2	−9.5
Stoves	−4.8	−7.8
Lumber and its products	**−4.5**	**−5.0**
Lumber, sawmills	−4.3	−5.0
Lumber, millwork	−3.9	−2.6
Furniture	−5.2	−6.4
Leather and its products	**−5.4**	**−9.6**
Leather	−1.5	−3.7
Boots and shoes	−6.6	−12.3
Paper and printing	**−0.9**	**+1.3**
Paper and pulp	−2.3	−1.0
Paper boxes	−2.9	+4.8
Paper and printing—Con.		
Printing, book and job	−1.7	(1)
Printing, newspapers	+1.7	+3.2
Chemicals and allied products	**−4.7**	**−6.6**
Chemicals	−1.0	−2.8
Fertilizers	+4.3	+6.7
Petroleum refining	−12.4	−14.1
Stone, clay, and glass products	**−6.0**	**−6.5**
Cement	−8.5	−10.4
Brick, tile, and terra cotta	−12.8	−15.4
Pottery	+0.1	+1.4
Glass	−0.1	+0.6
Metal products, other than iron and steel	**−1.1**	**+0.9**
Stamped and enameled ware	+1.0	−0.7
Brass, bronze, and copper products	−1.9	+1.4
Tobacco products	**−3.5**	**−5.2**
Chewing and smoking tobacco and snuff	−1.1	−3.7
Cigars and cigarettes	−3.9	−5.4
Vehicles for land transportation	**+4.7**	**+7.9**
Automobiles	+20.5	+29.0
Carriages and wagons	−3.8	−0.4
Car building and repairing, electric-railroad	−5.7	−5.5
Car building and repairing, steam-railroad	−7.8	−7.5
Miscellaneous industries	**−11.8**	**−10.7**
Agricultural implements	+18.5	+24.8
Electrical machinery, apparatus, and supplies	−5.0	−2.9
Pianos and organs	−13.4	−13.1
Rubber boots and shoes	−9.1	−12.4
Automobile tires	−1.2	−0.6
Shipbuilding	−24.4	−21.6
All industries	**−3.9**	**−3.3**

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION		
New England	−10.0	−10.3
Middle Atlantic	−6.1	−5.5
East North Central	+5.2	+8.6
West North Central	−0.8	+0.6
South Atlantic	−4.4	−4.3
East South Central	−3.2	−4.7
West South Central	−6.2	−7.1
Mountain	−1.8	−2.2
Pacific	−2.4	−2.2
All divisions	**−3.9**	**−3.3**

[1] No change.

Per Capita Earnings

PER CAPITA earnings in June, 1928, for employees in the combined 54 industries surveyed were unchanged as compared with May, 1928, and 0.7 per cent higher than in June, 1927.

Increases in per capita earnings in June, 1928, as compared with May, 1928, were reported in 30 of the 54 industries, the notable increases having been in the men's clothing, boot and shoe, carriage and wagon, and the two tobacco industries. The outstanding decreases in per capita earnings were in the cast-iron pipe, automobile, and pottery industries.

Employees in 29 industries were averaging higher earnings in June, 1928, than in June, 1927, the significant gains having been in the automobile, machine tool, agricultural implement, and paper-box industries. The outstanding decreases in per capita earnings through this comparison over the 12-month period were in the carpet, cotton goods, cast-iron pipe, and boot and shoe industries.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, JUNE, 1928, WITH MAY, 1928, AND JUNE, 1927

Industry	Per cent of change June, 1928, compared with—		Industry	Per cent of change June, 1928, compared with—	
	May, 1928	June, 1927		May, 1928	June, 1927
Clothing, men's	+8.6	−3.7	Printing, newspapers	+0.2	+1.5
Boots and shoes	+7.1	−6.3	Brick, tile, and terra cotta	+0.1	−3.2
Cigars and cigarettes	+5.8	−1.4	Ice cream	+0.1	+1.0
Carriages and wagons	+5.7	+3.7	Baking	−0.1	+0.4
Chewing and smoking tobacco and snuff	+5.1	−2.7	Steam fittings and steam and hot-water heating apparatus	−0.2	+0.6
Shipbuilding	+3.8	+3.9	Agricultural implements	−0.3	+5.3
Fertilizers	+3.7	+2.7	Pianos and organs	−0.3	+0.1
Paper boxes	+2.9	+7.8	Shirts and collars	−0.3	−2.7
Confectionery	+2.6	+0.4	Woolen and worsted goods	−0.3	−1.2
Automobile tires	+2.5	+0.7	Stoves	−0.4	−2.9
Furniture	+2.4	−0.9	Brass, bronze, and copper products	−0.7	+3.3
Slaughtering and meat packing	+1.7	+1.5	Leather	−0.9	−2.2
Rubber boots and shoes	+1.6	−3.6	Paper and pulp	−0.9	+0.9
Electrical machinery, apparatus, and supplies	+1.5	+1.8	Structural ironwork	−1.0	+1.6
Hardware	+1.3	−0.1	Chemicals	−1.2	−1.6
Lumber, millwork	+1.3	+1.4	Cotton goods	−1.4	−9.8
Silk goods	+1.2	+3.4	Car building and repairing, electric railroad	−1.5	+0.2
Millinery and lace goods	+1.1	−3.5	Clothing, women's	−1.5	−0.9
Sugar refining, cane	+0.9	−0.1	Stamped and enameled ware	−1.5	−1.9
Foundry and machine-shop products	+0.8	+2.5	Cement	−1.6	−1.7
Hosiery and knit goods	+0.5	−0.9	Lumber, sawmills	−1.7	−0.8
Machine tools	+0.5	+6.9	Dyeing and finishing textiles	−2.6	−1.3
Printing, book and job	+0.5	+1.8	Iron and steel	−2.8	+1.6
Car building and repairing, steam-railroad	+0.4	+0.6	Carpets and rugs	−3.4	−12.7
Flour	+0.2	+0.5	Pottery	−4.8	+1.5
Glass	+0.2	+0.9	Automobiles	−5.2	+7.3
Petroleum refining	+0.2	−2.2	Cast-iron pipe	−7.8	−7.7

Wage Changes

THIRTY-NINE establishments in 16 industries reported wage-rate increases made during the month ending June 15, 1928. These increases averaged 5.3 per cent and affected 2,355 employees, or 10 per cent of the total number in the establishments concerned.

Fifteen establishments in 12 industries reported wage-rate decreases made during the same period. These decreases averaged 9.3 per cent

and affected 1,607 employees, or 65 per cent of the total number in the establishments concerned.

No especial general significance may be attached to any of these wage changes.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN MAY 15 AND JUNE 15, 1928

Industry	Establishments		Per cent of increase or decrease in wage rates		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
Increases							
Confectionery	308	1	6.4	6.4	248	97	1
Baking	653	8	6.0–10.0	9.8	147	9	(1)
Clothing, men's	291	1	5.0	5.0	17	12	(1)
Hosiery and knit goods	233	1	10.0	10.0	68	34	(1)
Silk goods	189	1	5.0	5.0	24	5	(1)
Structural iron work	163	1	11.8	11.8	15	12	(1)
Foundry and machine-shop products	968	7	5.0–10.0	9.0	380	9	(1)
Machine tools	148	2	1.5–8.5	3.7	19	8	(1)
Lumber, millwork	269	3	5.0–10.0	6.2	60	7	(1)
Furniture	420	1	24.0	24.0	9	5	(1)
Printing, newspapers	213	2	2.5– 6.0	3.3	169	13	(1)
Chemicals	122	2	5.0–10.0	8.6	125	6	(1)
Cigars and cigarettes	230	1	6.0	6.0	26	100	(1)
Automobiles	210	2	2.0– 8.0	3.3	510	5	(1)
Car building and repairing, electric-railroad	383	4	1.0–10.0	1.3	459	90	2
Electrical machinery, apparatus, and supplies	176	2	1.0– 9.1	2.7	79	5	(1)
Decreases							
Clothing, men's	291	2	3.5–10.0	7.9	276	92	(1)
Hosiery and knit goods	233	2	10.0	10.0	98	16	(1)
Shirts and collars	97	2	10.0	10.0	77	94	(1)
Silk goods	189	1	14.0	14.0	42	42	(1)
Woolen and worsted goods	183	1	10.0	10.0	52	53	(1)
Foundry and machine-shop products	968	1	5.0–10.0	7.5	408	100	(1)
Lumber, sawmills	453	1	10.0	10.0	450	100	(1)
Furniture	420	1	20.0	20.0	10	26	(1)
Boots and shoes	214	1	10.0	10.0	110	100	(1)
Chemicals	122	1	16.7	16.7	26	100	(1)
Brick, tile, and terra cotta	662	1	12.0	12.0	40	100	(1)
Pianos and organs	43	1	10.0	10.0	18	8	(1)

[1] Less than one-half of 1 per cent.

Indexes of Employment and Pay-roll Totals in Manufacturing Industries

INDEX numbers for June, May, and April, 1928, and for June, 1927, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

The general index of employment for June, 1928, is 85.6, this number being 0.1 per cent higher than the index for May, 1928, 0.1 per cent lower than the index for April, 1928, and 3.9 per cent lower than

the index for June, 1927. The general index for pay-roll totals in June, 1928, is 90.2, this number being 0.1 per cent higher than the index for May, 1928, 0.3 per cent higher than the index for April, 1928 and 3.3 per cent lower than the index for June, 1927.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JUNE, 1927, AND APRIL, MAY, AND JUNE, 1928

[Monthly average, 1923=100]

Industry	Employment				Pay-roll totals			
	1927	1928			1927	1928		
	June	April	May	June	June	April	May	June
General index	**89.1**	**85.7**	**85.5**	**85.6**	**93.3**	**89.9**	**90.1**	**90.2**
Food and kindred products	**90.7**	**85.6**	**85.8**	**87.0**	**96.4**	**88.9**	**91.0**	**93.3**
Slaughtering and meat packing	83.6	78.8	78.0	80.6	87.6	80.7	81.5	85.8
Confectionery	77.5	73.8	72.9	71.8	87.6	77.1	80.4	81.2
Ice cream	103.5	86.0	92.6	99.7	110.7	93.4	100.1	107.8
Flour	85.3	84.7	84.6	82.8	88.9	87.1	88.5	86.7
Baking	104.8	99.7	101.5	102.9	110.4	103.5	107.6	108.9
Sugar refining, cane	98.7	86.3	81.1	79.6	104.4	90.9	85.1	84.4
Textiles and their products	**86.0**	**83.7**	**81.5**	**81.0**	**86.2**	**80.5**	**78.9**	**78.7**
Cotton goods	87.6	80.7	76.8	76.2	88.5	74.0	70.9	69.4
Hosiery and knit goods	97.2	94.1	92.8	92.0	112.0	105.1	105.7	105.4
Silk goods	97.8	97.0	97.1	96.2	105.6	106.6	107.0	107.5
Woolen and worsted goods	78.2	73.8	74.8	76.1	77.5	69.2	73.5	74.5
Carpets and rugs	96.0	95.8	94.4	91.2	95.2	84.9	84.6	79.0
Dyeing and finishing textiles	97.2	97.7	96.4	94.5	99.7	100.6	100.3	95.7
Clothing, men's	82.5	75.4	73.6	77.8	77.3	60.5	61.3	70.4
Shirts and collars	77.7	78.2	76.3	74.3	79.6	76.8	75.9	73.7
Clothing, women's	77.3	87.7	83.5	79.3	72.4	86.9	78.7	73.6
Millinery and lace goods	64.9	74.5	70.7	66.2	68.2	78.9	70.8	67.1
Iron and steel and their products	**86.9**	**83.3**	**84.3**	**84.4**	**91.8**	**89.2**	**91.5**	**90.7**
Iron and steel	92.3	89.5	89.3	88.6	97.0	95.7	98.0	94.3
Cast-iron pipe	99.9	86.7	89.4	89.6	99.9	86.8	89.5	82.8
Structural ironwork	95.7	89.2	92.5	95.1	105.0	98.2	104.2	106.0
Foundry and machine-shop products	82.3	78.6	80.1	80.5	85.4	82.3	84.5	85.6
Hardware	82.0	77.2	77.3	77.8	90.4	84.3	84.0	85.7
Machine tools	95.1	96.9	99.6	101.3	105.5	114.8	117.6	120.2
Steam fittings and steam and hot-water heating apparatus	90.6	81.6	81.7	81.4	96.4	83.8	87.8	87.2
Stoves	80.5	74.6	76.0	76.6	81.7	74.4	74.9	75.3
Lumber and its products	**84.0**	**79.3**	**79.3**	**80.2**	**92.7**	**86.3**	**87.5**	**88.1**
Lumber, sawmills	80.7	75.2	75.8	77.2	90.1	83.1	85.5	85.6
Lumber, millwork	89.9	84.2	85.7	86.4	97.5	90.6	93.0	95.0
Furniture	91.6	90.3	87.3	86.8	98.8	94.4	90.9	92.5
Leather and its products	**85.2**	**82.9**	**80.8**	**80.6**	**82.5**	**73.9**	**71.7**	**74.6**
Leather	87.5	87.4	87.4	86.2	89.1	87.1	87.8	85.8
Boots and shoes	84.4	81.4	78.6	78.8	79.9	68.6	65.2	70.1
Paper and printing	**102.4**	**101.4**	**101.7**	**101.5**	**111.0**	**112.3**	**112.2**	**112.4**
Paper and pulp	92.0	89.8	89.4	89.9	97.0	97.1	96.3	96.0
Paper boxes	94.5	92.1	91.4	91.8	102.8	103.5	104.2	105.7
Printing, book and job	103.2	100.5	102.3	101.4	114.4	114.5	114.8	114.4
Printing, newspapers	115.3	117.7	117.6	117.3	123.3	127.2	127.2	127.2
Chemicals and allied products	**90.3**	**99.9**	**87.8**	**86.1**	**100.0**	**102.8**	**94.8**	**93.4**
Chemicals	94.0	95.0	92.3	93.1	108.1	107.8	105.6	105.1
Fertilizers	65.6	154.2	86.5	68.4	76.0	150.3	98.9	81.1
Petroleum	96.2	82.6	82.4	84.3	97.9	84.1	82.0	84.1
Stone, clay, and glass products	**99.0**	**89.1**	**92.4**	**93.1**	**105.6**	**95.7**	**98.8**	**98.7**
Cement	92.3	79.0	82.3	84.5	100.0	84.6	88.8	89.6
Brick, tile, and terra cotta	104.1	84.5	89.7	90.8	110.8	85.8	92.5	93.7
Pottery	102.6	102.1	102.3	102.7	105.4	112.5	111.8	106.9
Glass	94.9	92.4	94.9	94.8	103.1	102.8	103.7	103.7
Metal products, other than iron and steel	**90.7**	**90.2**	**90.2**	**89.7**	**91.5**	**91.4**	**93.4**	**92.3**
Stamped and enameled ware	84.2	87.5	87.5	85.0	83.2	85.8	86.3	82.6
Brass, bronze, and copper products	93.7	91.4	91.4	91.9	94.6	93.4	96.0	95.9

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JUNE, 1927, AND APRIL, MAY, AND JUNE, 1928—Continued

Industry	Employment				Pay-roll totals			
	1927	1928			1927	1928		
	June	April	May	June	June	April	May	June
Tobacco products	**84.6**	**80.0**	**80.9**	**81.6**	**87.8**	**74.6**	**78.0**	**83.2**
Chewing and smoking tobacco and snuff	89.2	91.9	88.2	88.2	98.9	91.1	90.6	95.2
Cigars and cigarettes	84.0	78.5	79.9	80.7	86.5	72.7	76.5	81.8
Vehicles for land transportation	**85.1**	**86.4**	**89.0**	**89.1**	**85.8**	**93.2**	**94.8**	**92.6**
Automobiles	101.6	115.8	122.4	122.4	96.4	126.1	131.3	124.4
Carriages and wagons	70.5	70.4	64.5	67.8	76.3	73.6	68.4	76.0
Car building and repairing, electric-railroad	89.8	86.3	85.4	84.7	93.1	90.6	90.2	88.0
Car building and repairing, steam-railroad	74.7	68.2	68.7	68.9	78.8	72.8	72.3	72.9
Miscellaneous industries	**98.7**	**87.1**	**86.9**	**87.1**	**104.9**	**93.8**	**91.2**	**93.7**
Agricultural implements	89.5	105.5	105.5	106.1	101.1	125.6	125.8	126.2
Electrical machinery, apparatus, and supplies	94.8	88.2	88.9	90.1	101.7	93.8	95.9	98.7
Pianos and organs	82.9	75.2	72.9	71.8	86.0	77.6	76.1	74.7
Rubber boots and shoes	86.5	87.7	85.5	78.6	97.4	94.4	91.4	85.3
Automobile tires	113.8	108.9	109.5	112.4	120.2	117.5	113.6	119.5
Shipbuilding	99.7	76.7	76.1	75.4	103.7	83.7	79.1	81.3

Table 7 below shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to June, 1928.

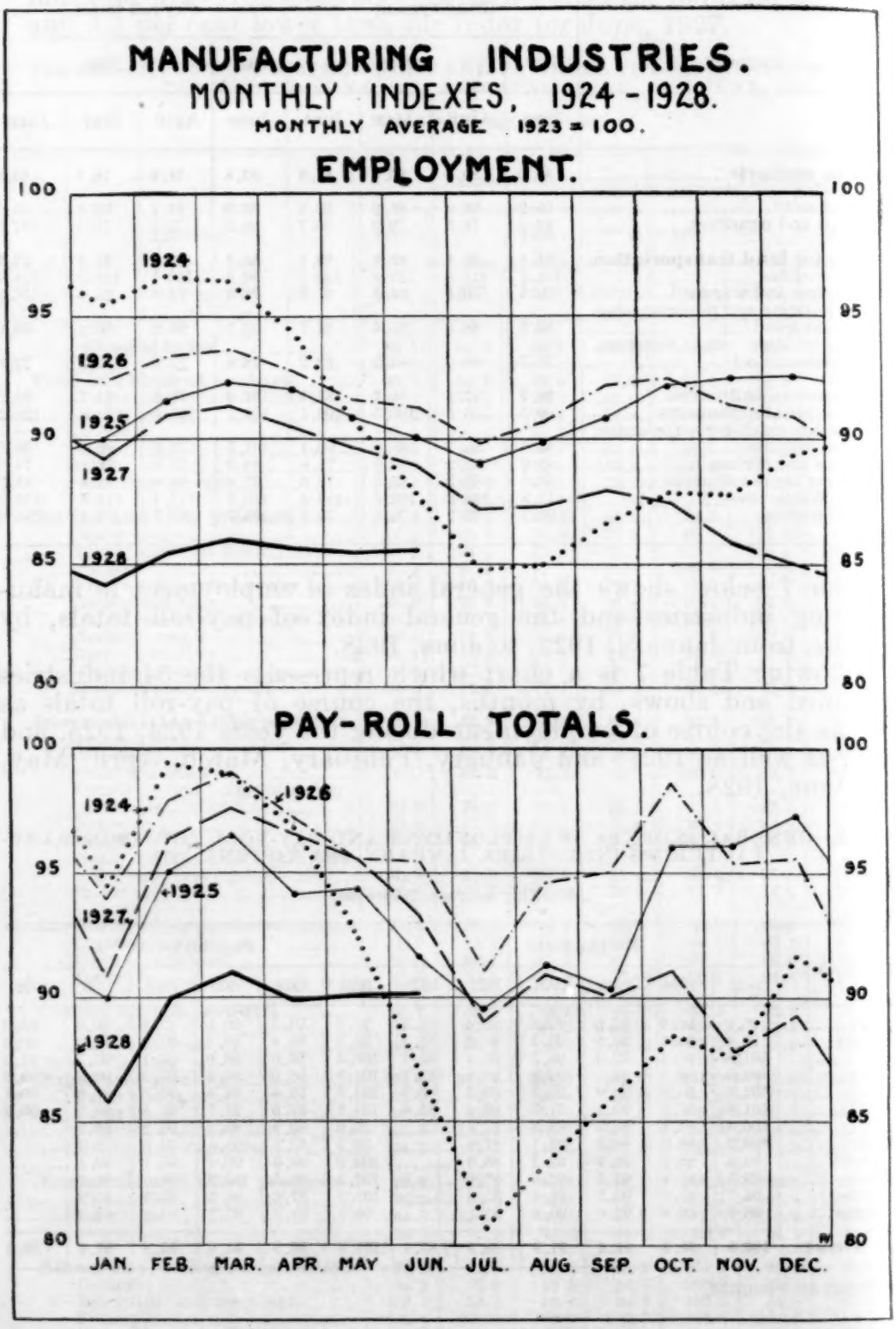
Following Table 7 is a chart which represents the 54 industries combined and shows, by months, the course of pay-roll totals as well as the course of employment during the years 1924, 1925, and 1926, as well as 1927. and January, February, March, April, May, and June, 1928.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO JUNE, 1928

[Monthly average, 1923=100]

Month	Employment						Pay-roll totals					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
January	98.0	95.4	90.0	92.3	89.4	84.2	91.8	94.5	90.0	93.9	90.9	85.8
February	99.6	96.6	91.6	93.3	91.0	85.5	95.2	99.4	95.1	97.9	96.4	90.0
March	101.8	96.4	92.3	93.7	91.4	86.1	100.3	99.0	96.6	99.1	97.7	91.2
April	101.8	94.5	92.1	92.8	90.6	85.7	101.3	96.9	94.2	97.2	96.6	89.9
May	101.8	90.8	90.9	91.7	89.7	85.5	104.8	92.4	94.4	95.6	95.6	90.1
June	101.9	87.9	90.1	91.3	89.1	85.6	104.7	87.0	91.7	95.5	93.3	90.2
July	100.4	84.8	89.3	89.8	87.3	-------	99.9	80.8	89.6	91.2	89.1	-------
August	99.7	85.0	89.9	90.7	87.4	-------	99.3	83.5	91.4	94.6	91.0	-------
September	99.8	86.7	90.9	92.2	88.0	-------	100.0	86.0	90.4	95.1	90.1	-------
October	99.3	87.9	92.3	92.5	87.6	-------	102.3	88.5	96.2	98.6	91.2	-------
November	98.7	87.8	92.5	91.4	85.9	-------	101.0	87.6	96.2	95.4	87.8	-------
December	96.9	89.4	92.6	90.9	85.1	-------	98.9	91.7	97.3	95.6	89.3	-------
Average	**100.0**	**90.3**	**91.2**	**91.9**	**88.5**	[1] **85.4**	**100.0**	**90.6**	**93.6**	**95.8**	**92.4**	[1] **89.5**

[1] Average for 6 months.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1924-1928.
MONTHLY AVERAGE 1923 = 100.
EMPLOYMENT.
100
95
90
85
80
1924
1926
1925
1927
1928
PAY-ROLL TOTALS.
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.

Proportion of Time Worked and Force Employed in Manufacturing Industries in June, 1928

REPORTS as to time worked and force employed in June were made by 9,366 establishments. Employees in 80 per cent of these establishments were working full time and employees in 20 per cent were working part time, while less than one-half of 1 per cent of the establishments were idle; 30 per cent of the establishments had a full normal force of employees and 69 per cent were operating with reduced forces.

The establishments in operation were employing an average of 87 per cent of a full normal force of employees who were working an average of 97 per cent of full time. These percentages show an increase of 1 per cent in operating time, as compared with the May report, with no change in average force employed.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN JUNE, 1928

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	**1,501**	(1)	**86**	**13**	**97**	**33**	**66**	**86**
Slaughtering and meat packing	144	------	90	10	99	38	62	89
Confectionery	265	1	65	34	93	7	92	66
Ice cream	196	------	98	2	100	22	78	84
Flour	248	1	77	23	95	36	63	86
Baking	639	(1)	94	6	99	46	54	95
Sugar refining, cane	9	------	89	11	98	11	89	83
Textiles and their products	**1,490**	(1)	**75**	**25**	**95**	**31**	**68**	**86**
Cotton goods	410	(1)	65	35	91	30	70	85
Hosiery and knit goods	188	------	80	20	95	34	66	89
Silk goods	158	------	90	10	98	40	60	93
Woolen and worsted goods	157	------	82	18	97	34	66	81
Carpets and rugs	26	------	65	35	89	19	81	90
Dyeing and finishing textiles	83	------	63	37	92	23	77	85
Clothing, men's	216	------	77	23	96	31	69	83
Shirts and collars	78	1	69	29	95	28	71	87
Clothing, women's	124	1	83	16	98	34	66	87
Millinery and lace goods	50	------	72	28	94	20	80	81
Iron and steel and their products	**1,598**	(1)	**71**	**29**	**95**	**26**	**74**	**85**
Iron and steel	155	2	71	27	95	17	81	85
Cast-iron pipe	34	------	50	50	89	26	74	82
Structural ironwork	148	------	85	15	99	32	68	89
Foundry and machine-shop products	879	(1)	69	31	95	23	77	83
Hardware	50	------	56	44	94	16	84	82
Machine tools	140	------	84	16	99	34	66	93
Steam fittings and steam and hot-water heating apparatus	93	------	72	28	96	32	68	85
Stoves	99	------	62	38	90	35	65	92
Lumber and its products	**986**	(1)	**75**	**25**	**96**	**26**	**74**	**85**
Lumber, sawmills	405	(1)	81	19	96	34	66	87
Lumber, millwork	229	------	77	23	97	20	80	77
Furniture	352	1	66	33	94	20	80	84
Leather and its products	**308**	**1**	**81**	**19**	**97**	**31**	**68**	**86**
Leather	122	------	89	11	98	36	64	84
Boots and shoes	186	2	75	24	96	28	70	86

[1] Less than one-half of 1 per cent.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN JUNE, 1928—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Paper and printing	**743**	(1)	**89**	**10**	**98**	**43**	**57**	**95**
Paper and pulp	172	1	85	15	97	33	66	92
Paper boxes	156	------	74	26	96	23	77	85
Printing, book and job	260	------	95	5	99	45	55	98
Printing, newspapers	155	------	100	------	100	70	30	101
Chemicals and allied products	**286**	(1)	**80**	**20**	**97**	**18**	**81**	**73**
Chemicals	96	------	89	11	98	39	61	91
Fertilizers	149	1	69	30	95	5	94	41
Petroleum refining	41	------	100	------	100	17	83	76
Stone, clay, and glass products	**598**	**2**	**85**	**12**	**98**	**27**	**70**	**87**
Cement	94	------	97	3	99	21	79	83
Brick, tile and terra cotta	365	3	82	15	97	25	72	84
Pottery	52	4	79	17	97	42	54	96
Glass	87	1	91	8	99	33	66	92
Metal products, other than iron and steel	**175**	------	**82**	**18**	**98**	**31**	**69**	**88**
Brass, bronze, and copper products	126	------	81	19	98	27	73	90
Stamped and enameled ware	49	------	84	16	98	41	59	87
Tobacco products	**207**	(1)	**73**	**27**	**95**	**43**	**57**	**91**
Chewing and smoking tobacco and snuff	26	------	88	12	97	38	62	85
Cigars amd cigarettes	181	1	71	29	95	44	56	92
Vehicles for land transportation	**1,141**	(1)	**90**	**10**	**99**	**29**	**71**	**94**
Automobiles	197	------	91	9	98	35	65	100
Carriages and wagons	50	2	72	26	95	16	82	65
Car building and repairing, electric-railroad	374	------	99	1	100	31	69	91
Car building and repairing, steam-railroad	520	(1)	85	15	98	26	74	80
Miscellaneous industries	**333**	**1**	**73**	**27**	**96**	**30**	**70**	**85**
Agricultural implements	73	------	67	33	95	36	64	95
Electrical machinery, apparatus, and supplies	136	------	74	26	98	28	72	85
Pianos and organs	32	------	47	53	90	19	81	74
Rubber boots and shoes	12	8	58	33	95	33	58	89
Automobile tires	51	2	86	12	97	39	59	94
Shipbuilding	29	------	90	10	99	17	83	61
All industries	**9,366**	(1)	**80**	**20**	**97**	**30**	**69**	**87**

[1] Less than one-half of 1 per cent.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to May, 1928, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1923 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES—JANUARY, 1923, TO MAY, 1928

[Monthly average, 1923=100]

Month	1923	1924	1925	1926	1927	1928
January	94.6	93.1	91.9	92.1	91.8	85.8
February	94.8	93.2	91.7	92.3	91.6	85.5
March	96.6	93.6	91.5	92.9	92.1	86.4
April	98.0	95.0	92.8	95.0	93.6	88.1
May	100.9	95.3	94.0	96.3	95.5	90.8
June	102.9	94.2	94.8	97.6	97.0	----
July	104.0	94.3	95.5	98.9	97.1	----
August	105.1	95.1	95.8	98.7	95.6	----
September	103.6	95.8	96.0	98.8	95.2	----
October	103.1	96.9	96.8	99.4	95.0	----
November	101.1	95.1	95.2	97.3	92.0	----
December	95.5	92.3	93.3	94.4	88.3	----
Average	**100.0**	**94.5**	**94.1**	**96.1**	**93.7**	[1] **87.3**

[1] Average for 5 months.

Table 2 shows the total number of employees on the 15th day each of May, 1927, and April and May, 1928, and pay-roll totals for each of the entire months considered, by principal occupational groups and various important occupations.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND TOTAL MONTHLY EARNINGS OF RAILROAD EMPLOYEES—MAY, 1927, AND APRIL AND MAY, 1928

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	May, 1927	April, 1928	May, 1928	May, 1927	April, 1928	May, 1928
Professional, clerical, and general	**281,783**	**270,957**	**271,169**	**$39,346,160**	**$38,642,607**	**$39,483,423**
Clerks	164,019	155,333	155,456	21,671,265	20,919,269	21,545,386
Stenographers and typists	25,265	24,659	24,655	3,149,697	3,159,343	3,203,427
Maintenance of way and structures	**457,367**	**388,649**	**434,304**	**42,427,791**	**35,806,397**	**40,983,742**
Laborers, extra gang and work train	80,795	58,557	74,063	6,408,603	4,431,312	6,014,613
Laborers, track and roadway section	239,430	203,898	228,096	17,629,536	14,572,784	17,043,843
Maintenance of equipment and stores	**490,133**	**461,876**	**461,986**	**65,260,959**	**59,936,116**	**62,333,677**
Carmen	104,958	99,220	99,663	15,853,522	14,557,102	15,353,095
Machinists	58,747	56,251	56,169	9,392,699	8,651,173	9,001,987
Skilled trades helpers	107,529	101,030	101,072	12,141,301	11,061,626	11,560,982
Laborers (shops, engine houses, power plants, and stores)	41,460	38,159	37,966	4,009,640	3,557,449	3,675,604
Common laborers (shops, engine houses, power plants, and stores)	55,915	52,303	52,784	4,565,934	4,159,328	4,370,346
Transportation, other than train, engine, and yard	**205,404**	**195,574**	**196,593**	**25,522,880**	**24,092,852**	**25,093,495**
Station agents	30,412	29,941	29,914	4,751,148	4,634,438	4,816,522
Telegraphers, telephoners, and towermen	24,818	23,328	23,310	3,847,796	3,558,402	3,684,608
Truckers (stations, warehouses, and platforms)	37,882	33,707	33,878	3,521,389	3,135,312	3,301,377
Crossing and bridge flagmen and gatemen	21,974	21,314	21,368	1,695,323	1,632,047	1,647,339
Transportation (yard masters, switch tenders, and hostlers)	**23,318**	**22,135**	**22,151**	**4,482,536**	**4,246,722**	**4,348,539**
Transportation, train and engine	**318,157**	**302,618**	**306,621**	**64,388,006**	**59,416,454**	**62,814,924**
Road conductors	36,153	34,436	34,945	8,807,674	7,945,209	8,418,666
Road brakemen and flagmen	73,057	68,601	69,396	12,842,729	11,437,460	12,172,575
Yard brakemen and yard helpers	52,620	50,269	50,862	9,358,681	8,747,575	9,216,889
Road engineers and motormen	43,024	40,840	41,276	11,359,576	10,668,619	11,317,090
Road firemen and helpers	44,065	41,745	42,042	8,651,282	7,887,595	8,358,422
All employees	**1,776,162**	**1,641,809**	**1,692,824**	**241,428,332**	**222,141,148**	**235,057,800**

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the State labor offices:

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State and industry group	Per cent of change, April to May, 1928	
	Employment	Pay roll
Illinois		
Stone, clay, and glass products	+2.3	+7.6
Metals, machinery, and conveyances	+1.6	+2.6
Wood products	−2.3	−.9
Furs and leather goods	−4.8	+5.7
Chemicals, oils, paints, etc	+1.5	+4.3
Printing and paper goods	+1.1	−3.2
Textiles	−1.1	−1.1
Clothing, millinery, and laundering	−.9	−3.9
Food, beverages, and tobacco	+.4	+4.4
All manufacturing industries	+.7	+2.1
Trade, wholesale and retail	−.0	−.2
Public utilities	+1.1	−.0
Coal mining	+114.0	+65.7
Building and contracting	+8.6	+9.8
All industries	+1.9	+2.5
	May to June, 1928	
Iowa		
Food and kindred products	+3.6	
Textiles	+3.1	
Iron and steel works	+4.3	
Lumber products	+4.9	
Leather products	−4.1	
Paper products, printing and publishing	+1.6	
Patent medicines, chemicals and compounds	+1.4	
Stone and clay products	+3.4	
Tobacco and cigars	+2.7	
Railway car shops	+.2	
Various industries	−1.7	
All industries	+2.1	
Maryland		
Food products	−2.4	+0.9
Textiles	−1.6	−3.1
Iron and steel and their products	+.8	−1.1
Lumber and its products	−.5	+.8
Leather and its products	+3.7	+1.9
Rubber tires	+9.1	+15.3
Paper and printing	−2.2	−3.0
Chemicals and allied products	−5.5	−6.1
Stone, clay, and glass	−9.4	−9.7
Metal products, other than iron and steel	−3.7	−4.9
Tobacco products	+4.5	+2.9
Machinery (not including transportation equipment)	−5.5	−4.4
Musical instruments	+.7	−2.9
Transportation equipment	+4.3	+18.4
Car building and repairing	−.6	+.8
Miscellaneous	−2.8	+.2
All industries	−1.6	−1.0

State and industry group	Employment—index numbers (1919–1923=100)	
	May, 1928	June, 1928
Massachusetts		
Boots and shoes	64.2	56.6
Bread and other bakery products	102.2	105.8
Cars and general shop construction and repairs, steam railroads	70.2	70.2
Clothing, men's and women's	80.7	84.0
Confectionery	73.0	77.4
Cotton goods	46.1	43.9
Dyeing and finishing textiles	100.0	97.6
Electrical machinery, apparatus, and supplies	98.4	102.4
Foundry and machine-shop products	66.4	65.0
Furniture	103.1	98.2
Hosiery and knit goods	82.3	76.6
Jewelry	98.5	99.4
Leather, tanned, curried, and finished	84.2	81.3
Paper and wood pulp	91.5	91.6
Printing and publishing	105.8	106.0
Rubber footwear	97.4	82.5
Rubber goods, tires and tubes	85.2	85.9
Silk goods	107.2	105.7
Textile machinery and parts	49.7	51.1
Woolen and worsted goods	80.1	81.3
All industries	75.4	73.6

	Per cent of change, April to May, 1928	
	Employment	Pay roll
New Jersey		
Food and kindred products	−4.8	−3.0
Textiles and their products	−1.7	+1.2
Iron and steel and their products	+1.3	+3.2
Lumber and its products	−1.8	−3.2
Leather and its products	−2.8	−3.6
Tobacco products	+4.9	+23.7
Paper and printing	+1.2	+5.5
Chemicals and allied products	−.4	−3.2
Stone, clay, and glass products	+1.4	+3.1
Metal products other than iron and steel	−.7	+2.2
Vehicles for land transportation	+4.4	+7.3
Miscellaneous	+1.0	+2.4
All industries	+.1	+1.8
New York		
Stone, clay, and glass	+3.2	+5.9
Metals and machinery	+.4	+2.2
Wood manufactures	−1.1	−.5

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State and industry group	Per cent of change, April to May, 1928	
	Employment	Pay roll
New York—Continued		
Furs, leather, and rubber goods	−2.9	−2.4
Chemicals, oils, paints, etc	−.4	+.4
Paper	−.4	−1.1
Printing and paper goods	+.1	+.4
Textiles	−2.8	−2.0
Clothing and millinery	−5.2	−5.7
Food and tobacco	−.8	+2.4
Water, light, and power	+.4	−.4
All industries	−1.0	+.3
	May to June, 1928	
Oklahoma		
Cottonseed oil mills	−28.2	−26.0
Food production:		
Bakeries	+.0	−1.2
Confections	−5.2	−4.9
Creameries and dairies	+2.8	+5.5
Flour mills	+1.9	+4.9
Ice and ice cream	+9.1	+9.3
Meat and poultry	−2.5	−1.8
Lead and zinc:		
Mines and mills	+5.3	+2.5
Smelters	−3.4	−4.9
Metals and machinery:		
Auto repairs, etc	+6.8	+5.2
Machine shops and foundries	−1.9	+.7
Tank construction and erection	+17.4	+37.4
Oil industry:		
Producing and gasoline manufacture	+5.3	+2.8
Refineries	+7.9	+3.3
Printing: Job work	−9.4	−9.4
Public utilities:		
Steam railway shops	+.6	+.0
Street railways	+7.8	+4.4
Water, light, and power	+33.1	+60.3
Stone, clay, and glass:		
Brick and tile	+66.7	+62.5
Cement and plaster	+1.4	+3.3
Crushed stone	+.9	+15.2
Glass manufacture	−11.8	−10.5
Textiles and cleaning:		
Textile manufacture	+8.8	+17.8
Laundries and cleaning	−.2	+1.4
Woodworking:		
Sawmills	+.3	+7.8
Millwork, etc	+2.5	+3.3
All industries	+5.0	+5.8

State and industry group	Index numbers (1923–1925=100)	
	May, 1928	June, 1928
Pennsylvania	*Employment*	*Employment*
Metal products	82.4	81.8
Transportation equipment	69.6	[1] 70.0
Textile products	95.4	96.1
Foods and tobacco	96.7	98.7
Stone, clay, and glass products	87.6	87.3
Lumber products	69.2	69.8
Chemical products	97.1	96.7

State and industry group	Index numbers (1923–1925=100)	
	May, 1928	June, 1928
Pennsylvania—Continued	*Employment*	*Employment*
Leather and rubber products	98.2	98.2
Paper and printing	91.6	91.8
All industries	86.7	86.7
	Pay rolls	*Pay rolls*
Metal products	87.5	84.4
Transportation equipment	68.3	[1] 72.0
Textile products	99.6	100.2
Foods and tobacco	98.2	101.3
Stone, clay, and glass products	89.3	88.7
Lumber products	67.3	69.8
Chemical products	106.4	104.9
Leather and rubber products	100.8	101.3
Paper and printing	107.0	105.8
All industries	89.6	89.0

	Per cent of change, March to April, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Agriculture	+1.7	+6.6
Logging	−20.1	−18.3
Mining	−10.8	−11.3
Stone crushing and quarrying	+7.5	−.7
Manufacturing:		
Stone and allied industries	+7.0	+2.8
Metal	+.3	−5.1
Wood	−.5	−3.6
Rubber	−4.3	−9.8
Leather	−.1	−4.5
Paper	−2.6	−.6
Textiles	−1.3	−2.6
Foods	−6.8	−7.0
Light and power	+4.6	+1.8
Printing and publishing	−.5	+1.8
Laundering, cleaning, and dyeing	+2.3	+2.3
Chemical (including soap, glue, and explosives)	−1.3	−2.3
All manufacturing	−.9	−8.5
Construction:		
Building	+17.9	+.1
Highway	+72.7	+49.9
Railroad	+26.3	+10.0
Marine dredging, sewer digging	+8.6	−4.2
Communication:		
Steam railways	−4.9	−6.2
Electric railways	.0	+.4
Express, telephone, and telegraph	−4.6	+1.2
Wholesale trade	+.7	−2.2
Hotels and restaurants	+.9	----
Nonmanual		
Manufacturing, mines, and quarries	+.8	−.2
Construction	.0	+.6
Communication	+3.8	+3.3
Wholesale trade	−1.0	−.9
Retail trade—Sales force only	+12.7	+6.4
Miscellaneous professional services	+.7	−2.6
Hotels and restaurants	−.3	----

[1] Preliminary.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State and industry group	Per cent of change, May, 1927, to May, 1928	
	Employment	Pay roll
California		
Stone, clay, and glass products	−9.2	−8.3
Metals, machinery, and conveyances	−8.0	−8.7
Wood manufactures	+.8	+3.7
Leather and rubber goods	−2.9	−7.0
Chemicals, oils, paints, etc	−16.9	−21.2
Printing and paper goods	−2.9	−2.1
Textiles	−11.0	−12.7
Clothing, millinery, and laundering	+.2	−3.9
Foods, beverages, and tobacco	+1.1	+2.4
Water, light, and power	+5.4	+6.0
Miscellaneous	+1.6	+6.4
All industries	−4.7	−5.9
New York		
Stone, clay, and glass	−12.3	−9.9
Metals and machinery	−5.7	−4.7
Wood manufactures	−11.6	−13.6
Furs, leather, and rubber goods	−7.0	−9.6
Chemicals, oils, paints, etc	−3.5	−1.6
Paper	−1.0	+.3
Printing and paper goods	−.3	+.4
Textiles	−5.9	−9.6
Clothing and millinery	−5.6	−6.6
Food and tobacco	−3.2	−4.2
Water, light, and power	−7.1	−7.6
All industries	−5.6	−5.5
	June, 1927, to June, 1928	
Oklahoma		
Cottonseed-oil mills	−56.2	−53.5
Food production:		
Bakeries	+7.4	+10.4
Confections	−21.7	−25.7
Creameries and dairies	+13.8	−4.8
Flour mills	−22.0	−18.9
Ice and ice cream	+49.3	+112.6
Meat and poultry	−4.4	−2.1
Lead and zinc:		
Mines and mills	−36.4	−41.7
Smelters	+10.5	−3.3
Metals and machinery:		
Auto repairs, etc	−34.2	−35.9
Machine shops and foundries	−7.8	−20.9
Tank construction and erection	−45.0	−59.5
Oil industry:		
Producing and gasoline manufacture	−32.0	−32.3
Refineries	+1.8	−4.5
Printing: Job work	−8.3	−11.6
Public utilities:		
Steam railway shops	−18.5	−11.8
Street railways	+14.7	+13.4
Water, light, and power	+56.4	+87.1
Stone, clay, and glass:		
Brick and tile	+18.1	+25.7
Cement and plaster	−11.9	−4.5
Crushed stone	+3.0	+31.4
Glass manufacture	−13.1	−38.5

[1] Preliminary.

State and industry group	Per cent of change, June, 1927, to June, 1928	
	Employment	Pay roll
Oklahoma—Continued		
Textiles and cleaning:		
Textile manufacture	+85.7	+97.2
Laundries and cleaning	−20.1	−19.5
Woodworking:		
Sawmills	+156.4	+13.9
Millwork, etc	+14.7	+22.6
All industries	−7.2	−9.3
	Index numbers (1923–1925 = 100)	
	June, 1927	June, 1928
Pennsylvania		
	Employment	*Employment*
Metal products	90.3	81.8
Transportation equipment	90.5	[1] 70.0
Textile products	97.6	96.1
Foods and tobacco	98.3	98.7
Stone, clay, and glass products	96.7	87.3
Lumber products	90.7	69.8
Chemical products	95.5	96.7
Leather and rubber products	90.2	98.2
Paper and printing	95.2	91.8
All industries	93.4	86.7
	Pay rolls	*Pay rolls*
Metal products	93.5	84.4
Transportation equipment	90.3	[1] 72.0
Textile products	103.3	100.2
Foods and tobacco	103.5	101.3
Stone, clay, and glass products	98.6	88.7
Lumber products	90.4	69.8
Chemical products	102.6	104.9
Leather and rubber products	96.9	101.3
Paper and printing	105.4	105.8
All industries	96.3	89.0
	Per cent of change, April, 1927, to April, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Agriculture	−30.2	−44.1
Logging	+.5	+.7
Mining	−48.4	−51.1
Stone crushing and quarrying	+4.1	−17.6

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State and industry group	Per cent of change, April, 1927, to April, 1928		State and industry group	Per cent of change, April, 1927, to April, 1928	
	Employment	Pay roll		Employment	Pay roll
Wisconsin—Continued			**Wisconsin**—Continued		
Manual—Continued			*Manual*—Continued		
Manufacturing:			Construction—Continued.		
Stone and allied industries	+22.8	+6.9	Railroad	−4.2	−7.5
Metal	−5.6	−6.3	Marine dredging, sewer digging	−11.4	−12.3
Wood	−3.5	−6.5	Communication:		
Rubber	+7.6	−6.9	Steam railways	−6.1	+.7
Leather	−3.4	−2.6	Electric railways	−5.0	−3.0
Paper	−.3	−.5	Express, telephone, and telegraph	+13.8	+11.9
Textiles	+2.0	−.8	Wholesale trade	−.3	−12.0
Foods	−10.8	−9.5	Hotels and restaurants	−8.3	
Light and power	−5.1	−3.2	*Nonmanual*		
Printing and publishing	−.1	−.1	Manufacturing, mines, and quarries	−1.1	+2.6
Laundering, cleaning, and dyeing	−.9	−3.2	Construction	−2.7	−2.7
Chemical (including soap, glue and explosives)	−10.3	−9.4	Communication	−2.1	−.8
All manufacturing	−3.5	−5.1	Wholesale trade	+3.9	+3.8
Construction:			Retail trade—Sales force only	+2.0	−.6
Building	−31.1	−23.6	Miscellaneous professional services	+5.5	+17.2
Highway	+2.7	+16.9	Hotels and restaurants	+5.3	

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices [1] received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food on June 15, 1927, and May 15 and June 15, 1928, as well as the percentage changes in the year and in the month. For example, the retail price per pound of potatoes was 6.0 cents in June, 1927; 3.3 cents in May, 1928; and 2.9 cents in June, 1928. These figures show decreases of 52 per cent in the year and 12 per cent in the month.

The cost of the various articles of food combined shows a decrease of 3.7 per cent on June 15, 1928, as compared with June 15, 1927, and a decrease of 0.8 per cent on June 15, 1928, as compared with May 15, 1928.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JUNE 15, 1928, COMPARED WITH MAY 15, 1928, AND JUNE 15, 1927

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) June 15, 1928, compared with—	
		June 15, 1927	May 15, 1928	June 15, 1928	June 15, 1927	May 15, 1928
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	42.4	46.1	47.4	+12	+3
Round steak	do	37.0	40.4	41.6	+12	+3
Rib roast	do	31.1	34.1	34.7	+12	+2
Chuck roast	do	23.5	26.6	27.6	+17	+4
Plate beef	do	15.2	18.2	18.5	+22	+2
Pork chops	do	34.7	35.4	34.8	+0.3	−2
Bacon	do	47.1	43.1	43.2	−8	+0.2
Ham	do	55.5	51.2	51.6	−7	+1
Lamb, leg of	do	41.0	41.5	42.2	+3	+2
Hens	do	36.3	37.7	37.1	+2	−2
Salmon, canned, red	do	32.3	35.4	35.3	+9	−0.3
Milk, fresh	Quart	13.9	14.1	14.0	+1	−1
Milk, evaporated	15–16 oz. can	11.5	11.1	11.1	−3	0
Butter	Pound	51.8	54.6	53.9	+4	−1
Oleomargarine (all butter substitutes)	do	28.2	27.3	27.3	−3	0
Cheese	do	37.0	38.1	38.1	+3	0
Lard	do	18.8	18.1	18.2	−3	+1
Vegetable lard substitute	do	25.1	24.8	24.9	−1	+0.4
Eggs, strictly fresh	Dozen	33.5	37.5	38.8	+16	+3

[1] In addition to retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JUNE 15, 1928, COMPARED WITH MAY 15, 1928, AND JUNE 15, 1927—Continued

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) June 15, 1928, compared with—	
		June 15, 1927	May 15, 1928	June 15, 1928	June 15, 1927	May 15, 1928
		Cents	*Cents*	*Cents*		
Bread	Pound	9.3	9.1	9.2	−1	+1
Flour	do	5.5	5.6	5.7	+4	+2
Corn meal	do	5.2	5.3	5.3	+2	0
Rolled oats	do	9.0	8.9	8.9	−1	0
Corn flakes	8-oz. pkg	10.0	9.5	9.5	−5	0
Wheat cereal	28-oz. pkg	25.4	25.6	25.5	+0.4	−0.4
Macaroni	Pound	20.6	19.9	19.8	−1	−1
Rice	do	10.7	10.0	9.9	−7	−1
Beans, navy	do	9.3	12.0	12.3	+32	+3
Potatoes	do	6.0	3.3	2.9	−52	−12
Onions	do	8.8	7.6	6.4	−27	−16
Cabbage	do	9.6	8.2	5.5	−43	−33
Beans, baked	No. 2 can	11.5	11.4	11.4	−1	0
Corn, canned	do	15.6	15.9	15.9	+2	0
Peas, canned	do	16.7	16.8	16.8	+1	0
Tomatoes, canned	do	12.0	11.6	11.6	−3	0
Sugar	Pound	7.3	7.2	7.3	0	+1
Tea	do	77.3	77.2	77.3	0	+0.1
Coffee	do	47.9	49.0	49.2	+3	+0.4
Prunes	do	15.6	13.6	13.6	−13	0
Raisins	do	14.3	13.6	13.6	−5	0
Bananas	Dozen	33.5	32.7	32.4	−3	−1
Oranges	do	49.3	61.9	62.6	+27	+1
Weighted food index					−3.7	−0.8

Table 2 shows for the United States average retail prices of specified food articles on June 15, 1913, and on June 15 of each year from 1922 to 1928, together with percentage changes in June of each of these specified years, compared with June, 1913. For example, the retail price per pound of rice was 8.6 cents in June, 1913; 9.6 cents in June, 1922; 9.4 cents in June, 1923; 9.9 cents in June, 1924; 11.0 cents in June, 1925; 11.7 cents in June, 1926; 10.7 cents in June, 1927; and 9.9 cents in June, 1928.

As compared with June, 1913, these figures show increases of 12 per cent in June, 1922; 9 per cent in June, 1923; 15 per cent in June, 1924; 28 per cent in June, 1925; 36 per cent in June, 1926; 24 per cent in June, 1927; and 15 per cent in June, 1928.

The cost of the various articles of food combined showed an increase of 56.1 per cent in June, 1928, as compared with June, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE JUNE 15, OF CERTAIN SPECIFIED YEARS COMPARED WITH JUNE 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail price on June 15—								Per cent of increase June 15 of each specified year compared with June 15, 1913						
	1913	1922	1923	1924	1925	1926	1927	1928	1922	1923	1924	1925	1926	1927	1928
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*							
Sirloin steak..pound..	25.9	38.4	40.1	40.7	41.0	42.0	42.4	47.4	48	55	57	58	62	64	83
Round steak....do....	22.6	33.5	34.5	34.8	35.2	36.2	37.0	41.6	48	53	54	56	60	64	84
Rib roast.....do....	20.1	28.2	28.8	29.4	29.8	30.6	31.1	34.7	40	43	46	48	52	55	73
Chuck roast....do....	16.3	20.1	20.4	21.2	21.8	22.7	23.5	27.6	23	25	30	34	39	44	69
Plate beef.....do....	12.2	12.9	12.6	13.2	13.8	14.6	15.2	18.5	6	3	8	13	20	25	52
Pork chops.....do....	20.8	33.9	29.9	30.2	36.2	42.0	34.7	34.8	63	44	45	74	102	67	67
Bacon.....do....	27.3	40.4	39.0	36.2	47.0	51.5	47.1	43.2	48	43	33	72	89	73	58
Ham.....do....	27.3	51.9	45.4	44.6	53.0	59.7	55.5	51.6	90	66	63	94	119	103	89
Lamb, leg of....do....	19.4	38.0	39.1	38.7	38.4	41.9	41.0	42.2	96	96	99	98	116	111	118
Hens.....do....	21.9	36.9	35.4	35.9	36.9	40.2	36.3	37.1	68	62	64	68	84	66	69
Salmon, canned, red .....pound..	.....	32.2	31.1	31.2	31.3	38.1	32.3	35.3	.....	.....	.....	.....	.....	.....	.....
Milk, fresh....quart..	8.8	12.5	13.5	13.5	13.7	13.8	13.9	14.0	42	53	53	56	57	58	59
Milk, evaporated .....15–16 oz. can..	.....	10.9	12.2	11.6	11.3	11.5	11.5	11.1	.....	.....	.....	.....	.....	.....	.....
Butter.....pound..	35.2	44.9	50.0	48.6	52.7	50.3	51.8	53.9	28	42	38	50	43	47	53
Oleomargarine (all butter substitutes) .....pound..	.....	27.1	28.3	29.1	30.3	30.1	28.2	27.3	.....	.....	.....	.....	.....	.....	.....
Cheese.....do....	21.8	31.1	36.1	34.4	36.5	35.7	37.0	38.1	43	66	58	67	64	70	75
Lard.....do....	15.8	17.2	17.2	16.9	22.9	22.6	18.8	18.2	9	9	7	45	43	19	15
Vegetable lard substitute.....pound..	.....	22.4	22.7	24.9	25.8	25.8	25.1	24.9	.....	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh .....dozen..	27.9	34.1	35.4	36.1	42.3	40.7	33.5	38.8	22	27	29	52	46	20	39
Bread.....pound..	5.6	8.8	8.7	8.7	9.4	9.4	9.3	9.2	57	55	55	68	68	66	64
Flour.....do....	3.3	5.3	4.8	4.6	6.1	6.1	5.5	5.7	61	45	39	85	85	67	73
Corn meal.....do....	2.9	3.9	4.0	4.4	5.4	5.1	5.2	5.3	34	38	52	86	76	79	83
Rolled oats.....do....	.....	8.7	8.8	8.8	9.2	9.1	9.0	8.9	.....	.....	.....	.....	.....	.....	.....
Corn flakes .....8-oz. package..	.....	9.9	9.7	9.7	11.0	10.9	10.0	9.5	.....	.....	.....	.....	.....	.....	.....
Wheat cereal .....28-oz. package..	.....	25.8	24.4	24.3	24.6	25.4	25.4	25.5	.....	.....	.....	.....	.....	.....	.....
Macaroni.....pound..	.....	20.0	19.7	19.5	20.5	20.3	20.0	19.8	.....	.....	.....	.....	.....	.....	.....
Rice.....do....	8.6	9.6	9.4	9.9	11.0	11.7	10.7	9.9	12	9	15	28	36	24	15
Beans, navy....do....	.....	10.6	11.4	9.7	10.3	9.2	9.3	12.3	.....	.....	.....	.....	.....	.....	.....
Potatoes.....do....	1.8	3.5	3.2	3.3	3.5	5.0	6.0	2.9	94	78	83	94	178	233	61
Onions.....do....	.....	8.0	8.1	6.8	9.9	7.4	8.8	6.4	.....	.....	.....	.....	.....	.....	.....
Cabbage.....do....	.....	5.1	6.2	5.8	6.0	6.1	9.6	5.5	.....	.....	.....	.....	.....	.....	.....
Beans, baked .....No. 2 can..	.....	13.2	13.0	12.7	12.4	11.9	11.5	11.4	.....	.....	.....	.....	.....	.....	.....
Corn, canned..pound..	.....	15.5	15.4	15.8	18.2	16.4	15.6	15.9	.....	.....	.....	.....	.....	.....	.....
Peas, canned....do....	.....	17.8	17.5	18.1	18.4	17.4	16.7	16.8	.....	.....	.....	.....	.....	.....	.....
Tomatoes, canned .....pound..	.....	13.9	13.0	13.0	13.8	11.9	12.0	11.6	.....	.....	.....	.....	.....	.....	.....
Sugar, granulated .....pound..	5.3	7.1	11.1	8.3	7.2	6.9	7.3	7.3	34	109	57	36	30	38	38
Tea.....do....	54.4	68.0	69.5	70.9	75.8	76.9	77.3	77.3	25	28	30	39	41	42	42
Coffee.....do....	29.8	36.1	37.8	42.3	50.8	51.0	47.9	49.2	21	27	42	70	71	61	65
Prunes.....do....	.....	20.6	19.3	17.4	17.3	17.1	15.6	13.6	.....	.....	.....	.....	.....	.....	.....
Raisins.....do....	.....	24.1	17.6	15.4	14.5	14.7	14.3	13.6	.....	.....	.....	.....	.....	.....	.....
Bananas.....dozen..	.....	36.3	38.1	35.8	36.5	35.9	33.5	32.4	.....	.....	.....	.....	.....	.....	.....
Oranges.....do....	.....	63.5	53.9	45.1	60.9	50.3	49.3	62.6	.....	.....	.....	.....	.....	.....	.....
Weighted food index [1]..	.....	.....	.....	.....	.....	.....	.....	.....	44.0	47.6	45.7	58.6	63.4	62.1	56.1

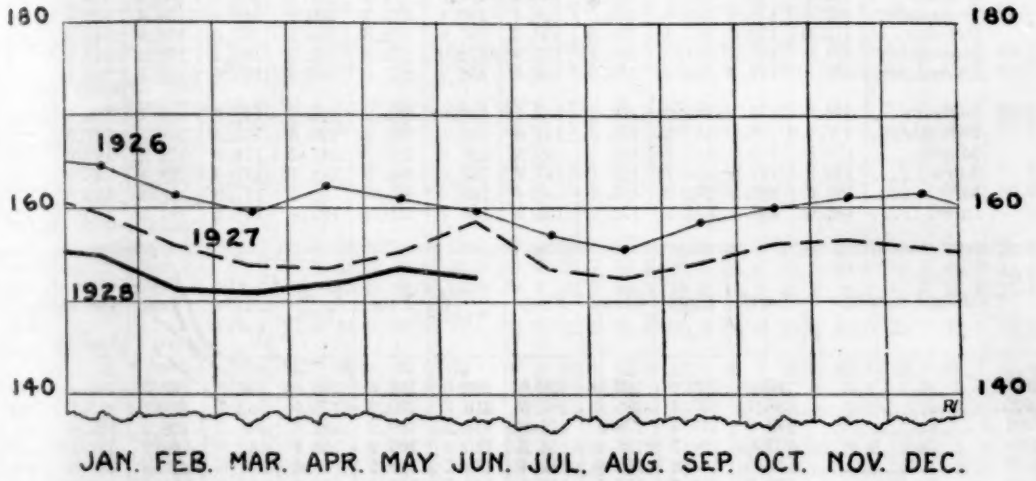
[1] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Index Numbers of Retail Prices of Food in the United States

IN TABLE 3 index numbers are given which show the changes in retail prices of specified food articles, by years, from 1913 to 1927,[2] and by months for 1927 and January through June, 1928. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1926 was 162.6, which means that the average money price for the year 1926 was 62.6 per cent higher than the average money price for the year 1913. As compared with the relative price, 159.8 in 1925, the figures for 1926 show an increase of nearly 3 points, but an increase of 1.75 per cent in the year.

TREND OF RETAIL PRICES OF FOODS

[1913=100]



In the last column of Table 3 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See Review of March, 1921, p. 25.) Although prior to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 153.8 for May and 152.6 for June, 1928.

The curve shown in the chart on this page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

[2] For index numbers of each month, January, 1913, to December, 1926, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 445, pp. 36 to 49.

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920 TO 1927, AND BY MONTHS FOR 1927 AND JANUARY THROUGH JUNE, 1928

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1927: January	160.6	158.3	153.0	141.9	124.0	174.3	181.1	211.2	180.8	158.4	152.5	170.1
February	161.0	158.7	153.5	141.9	123.1	171.0	179.6	210.8	180.8	158.4	153.5	170.1
March	161.8	159.6	153.5	142.5	123.1	174.3	179.3	210.0	181.7	158.4	154.6	168.8
April	164.6	163.2	156.1	145.6	125.6	175.7	178.2	210.8	182.6	157.3	152.5	167.9
May	166.5	165.5	157.6	146.9	125.6	173.3	176.3	209.3	180.3	156.2	139.4	167.4
June	166.9	165.9	157.1	146.9	125.6	165.2	174.4	206.3	170.4	156.2	135.2	167.4
July	171.7	170.0	160.1	149.4	126.4	166.2	172.6	203.0	167.1	157.3	134.2	167.0
August	172.0	170.9	160.1	149.4	126.4	179.5	172.2	201.9	166.2	158.4	134.2	167.4
September	172.4	170.9	160.6	150.0	128.1	193.8	172.2	200.0	166.2	158.4	139.4	170.6
October	172.0	170.0	161.1	151.9	130.6	197.6	172.6	199.3	167.6	159.6	145.4	173.3
November	171.3	169.5	161.1	153.1	133.9	172.9	171.5	197.0	167.1	159.6	147.3	174.7
December	172.8	171.3	163.6	156.9	138.0	156.2	167.8	192.9	167.6	160.7	152.5	176.5
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	191.8	174.2	157.3	140.7	172.4

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1927: January	126.6	162.0	167.9	169.7	170.0	126.4	235.3	136.4	142.5	168.5	159.3
February	124.1	128.1	167.9	169.7	170.0	124.1	223.5	136.4	142.3	167.4	156.0
March	122.8	102.6	167.9	166.7	170.0	124.1	217.6	134.5	142.6	165.4	153.8
April	120.9	98.3	167.9	166.7	170.0	123.0	217.6	132.7	142.6	163.8	153.6
May	120.3	97.4	167.9	166.7	170.0	121.8	264.7	132.7	142.3	161.7	155.4
June	119.0	97.1	166.1	166.7	173.3	123.0	352.9	132.7	142.1	160.7	158.5
July	119.0	107.0	166.1	166.7	173.3	123.0	247.1	134.5	142.5	159.7	153.4
August	119.6	121.7	166.1	169.7	173.3	123.0	200.0	132.7	142.6	159.1	152.4
September	121.5	141.2	166.1	166.7	173.3	121.8	188.2	130.9	141.9	158.7	154.0
October	124.1	164.1	166.1	166.7	173.3	120.7	176.5	130.9	142.5	159.1	156.1
November	123.4	178.8	166.1	163.6	173.3	119.5	176.5	130.9	142.5	160.4	156.5
December	121.5	172.8	164.3	163.6	173.3	118.4	176.5	129.1	142.1	161.4	155.9
1928: January	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6

[1] 22 articles in 1913–1920; 43 articles in 1921–1928.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928

[Exact comparisons of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak..pound..	42.2	44.3	44.8	41.0	43.2	46.4	41.6	46.3	46.6	[1] 68.4	[1] 72.1	[1] 72.8	49.0	53.5	54.5
Round steak....do....	37.8	40.6	41.5	37.2	39.8	42.4	35.6	39.5	40.0	54.3	56.5	56.1	42.8	47.5	48.1
Rib roast.....do....	32.2	35.1	36.8	30.9	33.7	35.5	29.9	32.5	32.3	39.3	42.4	42.0	37.4	41.1	40.5
Chuck roast....do....	24.6	28.2	28.9	23.1	25.5	28.0	24.4	25.9	27.0	29.4	31.5	31.8	28.1	31.8	32.3
Plate beef.....do....	15.2	18.4	19.1	15.6	18.5	19.0	15.0	17.4	17.4	19.5	22.4	21.8	11.5	13.8	13.6
Pork chops.....do....	34.5	35.4	34.9	34.1	33.5	33.1	32.9	33.8	33.2	36.2	36.9	36.2	37.1	37.8	36.8
Bacon, sliced....do....	44.3	41.4	40.6	42.1	38.2	38.7	47.3	42.4	42.4	45.6	40.6	40.9	52.4	49.0	49.7
Ham, sliced.....do....	56.8	50.4	50.8	56.9	51.6	52.4	54.7	51.1	50.5	60.3	55.4	55.8	59.3	54.2	55.5
Lamb, leg of....do....	40.6	42.5	42.9	41.5	40.7	42.5	40.4	45.0	46.6	42.8	42.3	43.6	42.8	42.4	44.1
Hens.....do....	34.1	34.9	34.7	37.3	39.3	38.7	33.4	31.4	31.5	40.0	40.4	40.3	39.5	41.1	40.7
Salmon, canned, red ..pound..	33.6	36.3	35.0	29.4	33.6	33.8	33.5	37.0	37.0	31.6	34.2	34.1	31.5	34.1	33.5
Milk, fresh.....quart..	18.0	18.0	16.5	14.0	14.0	14.0	16.3	18.7	18.7	14.4	14.8	14.8	16.0	16.0	16.0
Milk, evaporated ..15-16-oz. can..	13.5	13.3	13.2	11.3	11.0	11.1	12.6	11.7	11.7	12.2	11.5	11.6	11.5	11.5	11.5
Butter.....pound..	54.7	56.8	56.4	56.4	59.3	58.8	56.1	57.6	57.5	54.9	57.0	56.5	52.7	56.2	56.0
Oleomargarine (all butter substitutes) ..pound..	27.7	26.5	25.7	28.8	27.3	27.6	32.2	31.5	31.5	28.2	28.2	28.7	28.4	26.8	26.3
Cheese.....do....	36.3	35.0	35.6	35.0	36.0	36.0	36.5	36.8	36.5	38.0	40.7	40.6	40.1	42.2	43.0
Lard.....do....	18.3	17.5	18.0	16.9	16.4	16.4	19.6	18.2	18.3	18.9	18.2	18.2	17.6	17.4	17.6
Vegetable lard substitute.....pound..	21.8	21.8	21.9	22.3	22.8	23.3	22.1	19.7	20.3	24.4	25.0	25.0	25.1	25.5	25.5
Eggs, strictly fresh ..dozen..	33.1	35.3	36.8	30.3	36.1	37.3	32.5	35.4	37.5	47.7	51.8	52.8	45.1	47.2	51.9
Bread.....pound..	10.8	10.8	10.8	9.9	9.6	9.6	10.4	10.1	9.9	8.5	8.6	8.6	8.9	8.8	8.8
Flour.....do....	6.5	6.8	6.8	5.3	5.2	5.2	6.6	6.8	6.9	6.1	6.0	6.0	5.7	5.6	5.6
Corn meal.....do....	3.7	4.5	4.2	4.1	4.0	4.1	4.0	4.2	4.2	6.6	6.8	6.8	7.6	7.3	7.5
Rolled oats.....do....	9.5	9.5	9.5	8.2	8.0	8.1	10.1	9.7	9.7	9.1	8.9	8.9	8.5	8.6	8.7
Corn flakes .....8-oz. package..	9.8	9.7	9.7	9.0	8.9	8.6	11.1	10.1	10.0	10.1	9.5	9.5	9.7	9.4	9.5
Wheat cereal .....28-oz. package..	26.2	26.6	26.6	24.2	24.4	24.2	27.6	27.3	27.3	25.1	25.0	25.0	24.8	24.8	24.6
Macaroni.....pound..	21.7	21.3	21.3	19.1	19.4	19.0	18.9	18.6	18.9	22.7	21.6	21.7	22.7	22.3	22.3
Rice.....do....	10.5	8.9	8.9	9.5	9.2	9.0	10.5	9.5	9.4	11.9	11.0	11.0	11.5	10.5	10.5
Beans, navy.....do....	10.2	13.0	12.8	8.1	11.7	11.9	10.1	12.0	12.4	10.2	11.3	11.8	9.5	11.3	11.7
Potatoes.....do....	8.6	4.9	4.2	5.6	3.6	2.8	6.3	4.7	3.7	5.3	2.9	2.4	5.9	3.0	2.3
Onions.....do....	9.3	9.3	8.0	8.8	8.3	5.9	8.9	9.1	7.7	8.9	8.0	6.4	9.5	8.2	6.2
Cabbage.....do....	6.2	7.7	5.7	8.1	9.0	4.4	5.8	7.8	5.4	10.2	10.5	6.7	9.6	9.3	6.9
Beans, baked .....No. 2 can..	11.4	10.5	10.5	10.4	10.8	10.8	11.7	11.1	11.3	13.5	12.5	12.5	11.6	11.5	11.7
Corn, canned....do....	18.2	17.6	17.6	14.2	14.8	15.0	16.4	17.1	17.3	18.1	17.4	17.5	18.2	19.1	19.2
Peas, canned....do....	19.3	19.0	19.0	14.5	14.7	14.9	20.8	19.6	20.0	20.3	19.3	19.3	21.1	21.5	21.5
Tomatoes, canned .....No. 2 can..	11.5	10.3	10.2	10.7	10.0	10.2	10.9	10.5	10.0	12.5	11.8	11.8	13.1	13.5	13.1
Sugar.....pound..	7.7	7.7	7.7	6.5	6.5	6.5	7.9	7.6	7.5	7.4	7.1	7.1	7.1	6.9	6.9
Tea.....do....	104.1	106.3	106.3	73.0	71.0	72.7	96.2	100.3	100.3	75.1	72.4	72.4	60.9	61.0	61.0
Coffee.....do....	49.2	48.7	49.0	43.3	44.6	44.9	52.2	50.2	50.3	52.7	53.4	54.0	46.1	47.3	47.5
Prunes.....do....	17.2	14.7	14.7	13.1	11.4	11.5	17.9	15.9	15.8	15.3	12.5	12.5	15.8	13.4	15.1
Raisins.....do....	16.3	15.0	15.0	13.0	12.5	12.8	14.7	14.8	14.6	13.3	12.5	12.4	14.2	13.7	13.7
Bananas.....dozen..	29.5	28.9	29.4	25.0	23.9	23.6	37.9	38.0	38.0	44.4	46.0	44.0	34.0	34.3	33.8
Oranges.....do....	45.9	55.5	62.8	49.9	62.2	62.8	46.9	59.4	61.7	51.2	67.4	71.5	55.2	67.1	70.9

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	42.5	44.7	46.0	34.4	35.9	35.6	33.3	38.5	39.3	44.5	48.6	49.7	38.6	42.0	43.9
Round steak....do....	36.0	38.0	39.3	31.3	33.9	34.5	31.3	36.3	37.0	36.0	38.8	40.7	35.2	38.7	40.6
Rib roast.....do....	32.1	33.4	33.9	29.0	32.7	31.4	26.7	32.7	32.3	34.4	38.0	38.5	31.2	34.2	34.9
Chuck roast.....do....	24.2	26.6	27.4	20.8	24.2	24.1	21.0	25.9	26.2	25.2	28.5	30.3	23.0	25.3	26.5
Plate beef.....do....	14.1	17.1	17.7	14.3	16.4	15.9	14.6	18.4	18.9	15.0	17.8	18.3	15.9	19.9	20.3
Pork chops.....do....	37.1	38.1	36.6	35.4	34.8	34.7	35.9	33.9	34.6	31.5	34.1	31.9	30.2	34.9	34.1
Bacon, sliced....do....	43.4	38.8	38.7	54.6	50.0	50.0	41.0	36.7	36.5	50.3	47.0	47.3	41.3	38.4	38.2
Ham, sliced.....do....	53.6	49.0	50.1	60.4	54.6	55.0	51.1	45.3	45.3	55.9	52.0	52.0	55.2	49.8	50.4
Lamb, leg of....do....	37.1	37.4	40.4	40.5	38.7	38.2	41.3	44.3	44.3	41.8	40.5	41.4	39.2	42.3	43.6
Hens.....do....	38.1	39.7	39.1	35.7	36.1	35.1	37.6	37.7	37.5	36.5	39.6	38.0	38.3	39.3	39.1
Salmon, canned, red ..pound..	30.9	35.0	34.8	30.9	32.7	32.4	29.0	34.8	34.8	34.3	36.7	35.9	30.5	35.9	35.6
Milk, fresh.....quart..	13.0	13.0	13.0	14.0	14.0	14.0	19.0	19.0	19.0	14.0	14.0	14.0	13.3	14.0	14.0
Milk, evaporated .....15–16 oz. can..	11.3	10.7	10.7	11.5	10.6	10.6	11.8	11.6	11.3	11.2	10.8	10.9	11.2	10.8	10.8
Butter.....pound..	52.0	54.1	53.6	48.6	50.9	51.0	50.6	54.4	52.6	50.3	52.7	52.1	50.9	55.7	55.3
Oleomargarine (all butter substitutes) ..pound..	28.7	27.7	27.6	----	----	----	30.6	28.6	28.8	26.9	26.6	26.5	27.7	27.6	27.7
Cheese.....do....	39.0	38.9	39.3	36.7	37.7	37.3	33.6	34.8	34.9	42.1	42.9	43.2	36.3	39.2	39.1
Lard.....do....	17.6	16.9	16.9	23.7	21.2	21.1	20.0	18.8	18.8	18.8	18.3	18.5	16.7	16.8	16.9
Vegetable lard substitute.....pound..	25.9	25.6	25.5	29.7	30.0	30.3	22.9	21.3	21.5	26.7	26.2	26.2	25.8	25.8	25.7
Eggs, strictly fresh ..dozen..	33.3	39.2	40.4	39.9	36.4	40.2	32.1	35.4	37.5	35.9	41.6	42.8	28.3	36.8	36.6
Bread.....pound..	8.5	8.7	8.7	9.8	9.8	9.8	10.9	11.0	10.9	9.9	9.6	9.6	9.0	8.0	8.6
Flour.....do....	5.1	5.2	5.2	5.4	5.9	5.8	6.9	6.9	7.0	5.3	5.4	5.3	5.7	5.8	5.9
Corn meal.....do....	5.1	5.1	5.1	6.0	6.3	6.3	3.9	3.9	3.9	6.7	6.9	6.9	4.0	4.5	4.6
Rolled oats.....do....	8.6	8.7	8.8	7.5	8.0	8.1	9.5	9.4	9.5	8.7	8.4	8.5	8.7	8.9	8.9
Corn flakes .....8-oz package..	9.6	9.2	9.0	10.9	10.3	10.3	10.2	9.8	9.8	9.7	9.4	9.4	9.8	9.2	9.3
Wheat cereal .....28-oz package..	24.7	24.8	24.9	28.3	28.7	28.7	26.0	25.6	25.6	25.2	25.3	25.1	24.8	24.8	24.8
Macaroni.....pound..	21.2	21.4	21.2	20.1	19.7	19.4	18.6	18.5	18.5	19.2	18.7	18.9	18.5	18.4	18.4
Rice.....do....	10.1	9.9	9.9	11.1	11.1	11.1	7.4	6.7	6.7	11.1	10.3	10.5	10.3	9.4	9.4
Beans, navy.....do....	8.5	11.3	12.3	10.1	10.4	10.7	10.0	11.4	11.8	9.6	12.1	12.5	7.8	12.6	13.0
Potatoes.....do....	5.6	3.0	2.9	4.6	1.9	1.7	4.4	3.7	2.3	6.4	3.4	3.2	6.9	3.8	3.1
Onions.....do....	9.4	7.7	7.1	9.2	6.6	6.3	7.4	8.2	6.7	9.0	7.1	6.0	9.0	7.6	6.6
Cabbage.....do....	10.4	7.8	5.9	12.0	7.8	8.0	5.6	4.9	3.4	11.4	7.8	5.7	10.9	9.2	5.1
Beans, baked .....No. 2 can..	9.9	10.1	10.1	13.9	13.5	13.5	9.7	9.9	9.9	12.6	12.7	12.8	10.4	10.4	10.4
Corn, canned....do....	15.6	15.7	16.0	14.8	15.0	14.5	14.1	14.8	14.8	16.1	16.1	16.1	14.7	15.4	15.3
Peas, canned....do....	16.0	15.6	15.8	13.9	14.1	14.3	16.7	16.4	16.4	16.7	16.7	17.1	16.7	17.2	17.1
Tomatoes, canned .....No. 2 can	13.4	12.7	12.6	12.9	12.8	12.8	10.2	9.8	9.8	13.8	13.5	13.7	12.0	11.6	11.6
Sugar.....pound..	7.2	6.8	6.8	8.7	8.5	8.5	7.0	6.8	7.0	7.1	6.9	7.0	7.5	7.4	7.4
Tea.....do....	67.2	69.0	69.0	81.9	82.0	82.4	76.9	80.7	80.7	73.3	69.2	69.4	75.5	80.1	79.8
Coffee.....do....	46.7	46.8	46.9	54.5	54.6	55.2	43.9	44.8	44.8	48.2	47.3	47.2	42.6	44.8	44.9
Prunes.....do....	14.1	13.5	13.7	15.6	14.5	14.8	14.3	10.7	10.6	17.5	14.9	15.0	15.6	13.3	13.2
Raisins.....do....	13.4	12.7	12.8	15.1	14.4	14.6	14.5	12.5	12.5	15.1	14.0	14.3	14.4	14.2	14.2
Bananas.....dozen..	42.3	39.9	39.3	[2] 14.4	[2] 9.3	[2] 10.2	27.5	23.3	21.5	38.8	38.9	39.0	35.0	37.5	36.9
Oranges.....do....	55.2	64.5	64.1	48.0	62.4	64.4	40.0	51.7	53.0	47.6	65.2	61.7	45.7	61.6	61.6

[2] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak..pound..	42.2	45.3	47.5	40.4	44.0	46.1	37.3	42.3	43.2	36.6	38.8	40.7	42.3	47.6	49.7
Round steak.....do....	36.4	39.1	41.4	35.9	39.4	40.8	34.5	39.2	39.6	32.9	36.0	37.7	36.1	39.9	41.2
Rib roast.....do....	29.5	31.3	33.1	32.1	33.5	35.3	28.3	33.6	33.9	26.3	30.5	31.2	32.5	35.7	36.3
Chuck roast.....do....	24.6	28.0	30.4	26.1	28.3	29.7	23.3	27.5	28.6	21.0	23.8	25.3	23.9	27.6	29.2
Plate beef.....do....	14.4	18.7	19.1	16.3	19.2	20.3	18.1	21.3	21.4	12.2	14.4	15.9	14.4	17.5	18.8
Pork chops.....do....	34.0	37.1	34.8	34.1	32.4	32.3	35.4	36.5	35.1	30.9	33.9	32.3	34.9	37.7	36.9
Bacon, sliced.....do....	46.7	42.3	42.7	49.9	44.6	45.4	45.3	45.9	44.4	46.7	42.3	42.4	49.6	44.6	44.2
Ham, sliced.....do....	55.8	53.1	52.9	56.2	49.2	48.9	57.4	54.2	55.0	55.5	51.7	52.9	58.8	53.4	53.9
Lamb, leg of.....do....	39.9	40.5	41.1	47.5	45.0	47.6	44.3	46.1	44.8	37.8	38.0	38.9	42.3	42.8	45.7
Hens.....do....	36.9	39.0	37.6	37.7	39.3	38.5	31.5	32.2	32.6	29.4	32.6	30.4	38.2	39.3	38.7
Salmon, canned, red ..pound..	32.9	35.7	35.7	35.4	38.0	37.8	33.4	38.2	38.1	32.5	38.2	38.0	31.9	35.7	35.3
Milk, fresh.....quart..	13.7	13.7	13.7	12.0	11.0	11.0	11.0	12.3	12.3	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated .....15–16 oz. can..	11.4	10.9	10.9	11.4	11.0	11.0	13.1	13.3	13.1	10.7	10.2	10.2	11.2	10.7	10.6
Butter.....pound..	53.5	57.3	56.3	50.4	52.4	53.0	49.3	56.7	55.9	46.8	50.8	50.1	53.0	54.5	53.3
Oleomargarine (all butter substitutes) .....pound..	29.2	28.1	28.5	27.7	27.0	27.0	31.0	28.6	28.3	25.0	24.3	24.5	27.6	25.2	24.8
Cheese.....do....	39.0	39.8	39.8	36.5	35.9	36.4	36.9	38.0	38.0	36.8	39.4	39.1	38.7	38.9	38.2
Lard.....do....	20.0	19.4	19.4	16.1	15.3	15.3	21.8	21.2	21.2	19.1	17.9	18.3	18.8	18.0	18.0
Vegetable lard substitute.....pound..	26.7	26.8	26.8	26.2	27.2	27.3	22.7	24.0	24.0	22.3	21.4	22.0	26.9	26.6	26.4
Eggs, strictly fresh .....dozen..	33.7	40.9	43.3	26.5	33.6	34.1	27.3	33.7	34.9	29.1	33.1	33.7	34.2	38.6	39.8
Bread.....pound..	7.7	7.8	7.8	7.8	7.2	7.6	9.5	9.3	9.3	8.1	8.1	8.0	8.4	8.1	8.1
Flour.....do....	5.6	5.8	5.8	5.4	5.2	5.3	5.5	5.6	5.6	4.4	4.6	4.5	5.0	5.3	5.4
Corn meal.....do....	5.3	5.5	5.6	3.7	4.3	4.2	4.4	4.6	4.5	4.4	4.6	4.7	6.1	6.0	6.1
Rolled oats.....do....	9.4	9.3	9.3	9.4	9.2	9.0	10.4	10.5	10.1	7.6	7.5	7.6	9.5	9.3	9.2
Corn flakes .....8-oz. package..	10.1	9.9	9.9	10.0	10.0	9.9	10.5	10.2	10.2	9.8	9.5	9.5	10.0	9.2	9.2
Wheat cereal .....28-oz. package..	25.3	26.1	26.0	26.4	26.4	26.7	27.9	27.8	27.8	24.8	24.5	24.6	25.7	25.7	25.3
Macaroni.....pound..	22.0	21.1	21.1	21.0	20.4	20.4	21.4	21.8	21.6	19.6	19.4	19.3	22.3	21.9	21.7
Rice.....do....	11.3	10.3	10.1	12.6	11.9	11.9	11.9	11.5	11.3	9.7	8.9	9.0	11.7	11.4	11.4
Beans, navy.....do....	8.5	11.7	11.8	8.0	12.5	13.4	10.6	12.2	13.0	10.1	12.1	12.1	8.5	12.6	13.0
Potatoes.....do....	6.5	3.7	3.3	6.6	3.0	3.0	6.5	4.8	4.5	7.1	2.4	2.4	5.9	2.5	2.2
Onions.....do....	9.4	7.8	6.9	9.8	8.6	7.2	9.0	7.6	6.2	8.5	6.2	6.3	9.5	7.0	5.7
Cabbage.....do....	11.0	9.1	5.9	13.1	9.8	6.0	9.5	6.9	5.8	10.3	7.3	5.3	10.4	8.5	5.0
Beans, baked .....No. 2 can..	13.1	12.8	12.9	12.5	11.7	11.7	13.1	12.5	12.0	11.3	11.6	11.6	11.5	11.5	11.5
Corn, canned.....do....	16.8	17.0	17.1	14.0	14.8	14.8	18.3	18.7	18.4	13.7	14.1	14.3	16.2	15.7	15.8
Peas, canned.....do....	18.1	17.4	17.6	15.1	14.8	14.8	22.0	21.6	21.8	15.0	15.3	15.3	16.8	16.2	16.6
Tomatoes, canned .....No. 2 can..	14.0	13.6	13.7	13.3	12.7	12.3	13.1	11.8	12.0	11.7	12.1	12.0	12.6	12.1	12.1
Sugar.....pound..	7.6	7.7	7.6	7.8	7.7	7.7	8.0	7.8	7.8	8.0	7.6	7.7	7.5	7.4	7.4
Tea.....do....	79.7	80.0	81.0	88.8	86.2	86.2	106.7	106.5	105.5	68.8	69.9	70.0	75.5	75.4	75.2
Coffee.....do....	51.3	52.1	52.1	49.0	48.8	48.8	58.1	57.4	58.1	49.2	49.4	49.7	49.2	47.9	48.4
Prunes.....do....	15.2	14.2	14.0	16.9	15.8	15.8	21.0	16.9	18.1	15.9	14.3	14.6	18.2	14.1	14.0
Raisins.....do....	14.6	13.6	13.6	14.3	14.1	13.7	16.0	15.3	15.3	14.3	13.3	13.5	15.2	13.4	13.4
Bananas.....dozen..	[1] 10.4	[2] 9.9	[2] 9.7	37.9	34.0	34.0	33.8	36.3	35.0	[2] 11.1	[2] 9.0	[2] 9.4	33.9	31.0	29.0
Oranges.....do....	54.9	70.2	66.7	50.5	60.3	66.2	49.9	57.4	61.6	43.4	57.0	58.0	57.1	63.1	60.8

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	[1] 62.4	[1] 69.5	[1] 69.5	35.4	38.5	37.8	39.9	45.4	46.6	35.8	38.0	37.8	38.5	42.8	45.0
Round steak....do....	46.7	53.3	52.8	33.9	37.0	37.0	39.0	43.1	44.7	31.3	33.5	33.3	34.2	38.2	40.9
Rib roast.....do....	32.6	36.2	36.2	27.5	30.5	30.5	30.1	32.9	33.8	27.1	29.5	29.3	27.0	30.2	31.3
Chuck roast.....do....	23.8	27.5	28.0	21.4	25.0	24.6	25.3	28.8	29.3	19.2	22.7	22.8	19.8	24.4	25.5
Plate beef.....do....	13.3	16.7	17.3	18.2	21.1	20.0	16.1	18.8	19.3	12.5	14.8	14.2	13.6	17.9	18.5
Pork chops.....do....	35.3	35.1	35.5	34.3	32.7	32.2	32.2	35.8	35.3	33.1	30.0	30.5	31.8	32.0	32.4
Bacon, sliced....do....	44.6	42.0	42.1	45.8	40.9	39.9	42.3	41.7	41.5	44.1	36.3	37.0	44.3	41.9	42.9
Ham, sliced.....do....	56.0	50.9	50.4	53.2	47.5	46.7	54.9	52.9	52.9	53.2	45.0	46.5	53.3	49.1	49.7
Lamb, leg of....do....	44.2	43.8	45.1	34.3	32.5	32.5	42.5	44.0	46.0	39.0	41.0	40.3	37.6	37.1	37.4
Hens.....do....	42.7	44.2	45.3	32.9	34.0	31.0	36.2	39.6	39.4	35.8	33.3	33.6	30.6	33.4	32.9
Salmon, canned, red ..pound..	33.8	36.4	36.3	30.3	34.6	34.0	33.5	35.3	34.9	32.0	34.1	34.3	34.0	37.0	37.0
Milk, fresh....quart..	14.0	14.0	13.7	15.6	15.6	15.6	12.0	12.0	12.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated ..15-16 oz. can..	12.7	12.5	12.4	11.5	10.6	10.6	10.7	10.7	10.6	11.9	11.0	11.0	11.7	11.2	11.1
Butter.....pound..	52.1	56.2	55.3	47.3	53.8	52.8	51.1	55.1	54.2	52.6	55.1	54.7	49.5	53.6	51.9
Oleomargarine (all butter substitutes) ..pound..	30.5	26.6	26.8	27.2	25.5	25.4	28.9	29.5	29.3	30.6	30.4	31.0	25.6	25.5	25.2
Cheese.....do....	39.3	41.6	41.4	31.9	32.9	33.5	37.2	40.7	40.5	34.0	34.5	34.5	35.5	37.8	36.6
Lard.....do....	18.2	17.3	17.8	18.9	18.8	19.1	16.4	15.3	15.5	21.4	18.4	18.9	18.7	18.0	18.3
Vegetable lard substitute.....pound..	26.4	27.0	27.1	16.8	15.9	16.1	27.4	26.8	26.5	22.4	20.8	21.5	27.4	26.3	26.0
Eggs, strictly fresh ..dozen..	43.9	46.6	49.9	27.9	29.8	31.8	26.6	34.3	33.7	34.5	32.8	38.7	28.1	35.5	35.5
Bread.....pound..	9.2	8.7	8.7	8.5	8.2	8.2	8.1	7.9	7.9	10.9	10.1	10.1	9.7	9.8	9.8
Flour.....do....	5.8	5.9	6.0	5.2	5.3	5.3	5.5	5.5	5.5	6.5	6.6	6.6	5.0	5.4	5.5
Corn meal.....do....	6.7	7.0	7.0	4.2	4.2	4.1	4.2	4.0	4.1	4.2	4.4	4.3	5.0	5.4	5.3
Rolled oats.....do....	9.4	9.5	9.5	8.5	8.5	8.5	8.3	8.9	8.6	9.6	9.3	9.2	9.1	8.9	9.7
Corn flakes ..8-oz. package..	10.4	10.1	10.2	9.7	8.6	8.7	9.7	9.4	9.3	9.7	9.5	9.5	10.2	9.8	9.8
Wheat cereal ..28-oz. package..	25.3	25.3	25.3	25.4	25.5	24.7	24.8	25.9	25.2	24.4	24.0	24.1	26.4	26.8	26.6
Macaroni.....pound..	24.5	23.7	23.4	18.4	18.0	17.7	19.7	19.1	19.1	19.4	17.8	18.6	19.9	20.0	20.0
Rice.....do....	10.6	11.1	11.2	8.8	7.4	7.4	10.8	11.2	11.0	9.2	7.6	7.7	9.8	9.2	9.0
Beans, navy....do....	10.3	12.4	12.7	9.6	12.0	12.5	8.5	12.5	13.8	9.4	11.9	11.8	9.3	11.9	12.5
Potatoes.....do....	5.7	3.2	2.5	6.1	4.4	3.9	6.4	2.9	2.7	6.4	3.8	3.0	6.2	2.8	2.7
Onions.....do....	9.9	9.0	6.3	7.7	5.6	4.8	9.8	9.0	7.6	8.4	8.3	7.6	8.8	8.0	7.2
Cabbage.....do....	11.1	9.7	5.3	7.7	5.5	4.3	12.5	9.4	5.9	8.6	4.7	5.6	7.5	8.9	4.5
Beans, baked ..No. 2 can..	12.3	12.1	12.1	11.2	10.5	10.1	10.3	9.8	9.8	10.8	10.5	10.6	12.5	11.8	11.7
Corn, canned....do....	15.9	17.4	17.4	13.7	13.8	13.8	13.9	13.8	14.0	18.3	17.5	17.7	14.0	14.9	15.0
Peas, canned....do....	18.5	19.4	19.4	13.5	14.1	14.1	13.7	15.0	15.0	17.6	17.9	18.5	14.8	15.4	15.6
Tomatoes, canned ..do....	13.2	12.0	12.1	10.8	9.9	9.8	12.8	12.2	12.7	10.1	9.7	9.9	11.7	11.3	11.3
Sugar.....pound..	7.4	7.1	7.2	7.2	7.2	7.2	7.6	7.5	7.6	7.8	7.3	7.3	7.6	7.8	7.7
Tea.....do....	63.8	58.2	58.2	84.8	82.6	81.6	87.9	87.0	86.3	98.9	96.6	100.0	89.7	93.3	93.3
Coffee.....do....	49.2	49.8	50.5	41.1	43.0	43.0	48.0	48.0	47.9	48.8	47.6	47.6	49.4	51.7	51.8
Prunes.....do....	15.1	14.0	13.3	15.8	12.8	12.6	17.3	15.5	15.7	16.0	15.3	14.1	15.9	14.4	14.4
Raisins.....do....	13.8	12.8	13.1	14.4	12.9	12.8	15.1	14.8	14.5	14.8	14.6	14.5	14.8	14.4	14.6
Bananas.....dozen..	[2] 9.4	[2] 9.4	[2] 9.0	26.9	25.0	26.2	30.5	31.1	31.1	25.8	27.9	26.7	[2] 10.2	[2] 10.2	[2] 10.2
Oranges.....do....	51.8	65.2	62.9	41.8	46.6	47.7	46.9	56.6	59.6	34.4	60.0	65.0	49.3	59.0	60.9

[1] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	36.0	42.3	43.6	37.4	41.5	41.3	37.8	41.5	42.7	[1]59.4	[1]64.0	[1]63.5	37.0	41.8	43.7
Round steak, do	33.2	38.7	39.5	30.6	33.6	33.7	34.2	38.0	39.0	47.5	49.6	49.8	34.5	37.5	40.4
Rib roast, do	28.9	33.3	33.5	29.3	32.6	32.8	27.6	30.4	31.1	28.1	31.0	32.5	27.3	29.8	30.8
Chuck roast, do	21.9	26.6	27.1	19.9	23.6	23.2	22.1	24.6	25.9	24.0	26.3	28.1	20.8	24.2	25.6
Plate beef, do	17.0	20.2	21.0	13.9	15.9	16.0	17.5	20.2	20.9	16.8	19.9	20.4	16.2	20.2	19.7
Pork chops, do	31.4	33.0	32.8	42.1	40.3	41.3	30.9	32.3	31.2	32.0	34.6	33.9	30.0	30.7	30.0
Bacon, sliced, do	47.5	42.9	43.2	55.3	48.1	49.0	47.7	42.6	43.0	38.1	36.6	36.8	40.5	36.5	36.9
Ham, sliced, do	54.6	49.1	49.9	68.6	63.6	64.7	50.0	48.8	48.5	45.7	42.8	43.9	54.1	47.7	49.4
Lamb, leg of, do	43.3	40.0	41.4	36.7	37.6	37.6	42.5	42.7	40.7	39.5	41.3	41.7	41.2	38.1	38.5
Hens, do	29.8	29.8	29.7	42.6	42.3	42.6	32.0	35.6	36.0	42.4	42.1	42.1	30.6	31.3	30.6
Salmon, canned, red, pound	32.5	36.8	36.5	30.6	33.7	33.7	30.4	35.5	35.4	31.3	35.3	35.1	33.1	33.4	33.1
Milk, fresh, quart	15.0	15.0	14.0	15.0	15.0	15.0	12.0	12.0	12.0	13.8	15.0	15.0	15.0	15.0	15.0
Milk, evaporated, 15-16 oz. can	12.1	11.9	11.7	10.3	9.7	9.7	11.9	11.5	11.6	12.7	12.4	12.5	11.3	11.5	11.6
Butter, pound	50.3	54.4	52.5	50.3	50.7	51.2	53.4	56.7	55.3	54.7	58.0	56.8	51.2	55.1	53.6
Oleomargarine (all butter substitutes), pound	28.2	27.1	27.2	26.2	25.4	25.4	27.5	27.3	27.7	25.8	24.6	24.6	25.1	24.5	24.4
Cheese, do	36.8	37.6	36.7	38.1	38.6	38.0	36.8	37.1	37.1	36.6	38.3	38.5	33.4	34.5	35.2
Lard, do	21.3	20.8	20.7	19.1	19.1	19.5	17.9	16.9	17.3	18.3	17.8	17.9	16.0	15.5	16.2
Vegetable lard substitute, pound	22.1	20.4	19.9	24.5	23.6	23.7	29.1	26.8	26.8	26.0	26.4	26.2	20.0	21.7	21.5
Eggs, strictly fresh, dozen	26.9	31.5	35.4	35.4	34.5	36.0	25.7	34.2	34.2	41.5	44.2	46.1	29.9	33.4	34.7
Bread, pound	9.2	9.3	9.3	8.5	8.9	8.9	9.3	9.2	9.2	8.7	8.6	8.7	9.5	9.5	9.5
Flour, do	6.1	6.2	6.3	5.3	5.4	5.4	6.2	7.4	7.0	5.8	6.0	6.0	5.9	6.4	6.5
Cornmeal, do	3.8	4.1	4.1	5.3	5.8	5.8	4.0	4.2	4.2	5.4	5.2	5.2	3.8	3.9	4.0
Rolled oats, do	10.3	10.5	10.2	10.0	10.0	10.1	8.6	8.6	8.6	9.1	8.8	8.9	9.1	9.1	8.9
Cornflakes, 8-oz. package	10.2	10.0	9.8	9.7	9.5	9.5	9.8	9.3	9.4	9.9	9.4	9.2	9.8	9.6	9.7
Wheat cereal, 28-oz. package	25.9	27.4	27.2	24.9	25.0	25.0	25.1	26.6	26.6	25.4	25.8	25.8	25.7	25.8	25.8
Macaroni, pound	20.2	20.5	20.5	18.3	18.3	18.0	18.9	18.7	18.9	23.6	23.2	23.5	18.7	19.7	19.6
Rice, do	8.6	8.1	7.7	10.1	10.1	10.2	11.4	11.4	11.4	10.0	9.2	9.2	9.0	8.4	8.5
Beans, navy, do	9.1	11.3	11.9	9.6	12.0	12.2	8.2	12.3	12.6	9.1	12.2	12.6	8.9	12.1	12.7
Potatoes, do	5.5	4.0	3.4	5.2	3.3	2.3	7.5	3.8	3.8	4.9	2.7	1.8	6.6	3.9	3.3
Onions, do	9.1	8.6	6.9	7.4	5.6	4.7	9.6	8.8	6.6	7.8	7.4	6.1	6.5	6.8	5.4
Cabbage, do	7.4	8.0	4.3	9.2	4.9	4.3	9.6	9.8	5.1	10.5	9.8	6.0	7.8	6.9	4.2
Beans, baked, No. 2 can	10.4	10.6	10.9	10.6	11.3	11.3	10.2	10.4	10.5	13.0	13.1	13.1	11.3	10.8	10.8
Corn, canned, do	16.6	16.6	16.5	15.6	16.2	16.5	14.9	15.3	15.3	15.9	16.4	16.0	14.3	14.9	14.9
Peas, canned, do	17.5	17.1	17.1	17.0	16.9	16.9	13.8	15.5	15.3	17.7	17.8	17.8	15.1	16.1	15.7
Tomatoes, canned, No. 2 can	10.7	10.0	10.0	[2]14.4	[2]14.7	[2]14.8	10.8	10.3	10.5	12.9	12.1	12.1	9.8	9.9	9.6
Sugar, pound	7.9	7.8	8.0	7.0	7.0	7.1	7.8	7.5	7.7	7.6	7.3	7.4	7.2	7.2	7.3
Tea, do	107.4	104.4	103.5	74.1	75.3	74.8	91.2	89.5	89.5	64.2	65.2	65.2	99.5	99.1	99.1
Coffee, do	51.5	53.4	53.3	51.4	53.3	54.0	47.6	49.7	49.5	48.3	51.2	51.4	47.6	49.1	48.5
Prunes, do	16.8	13.9	14.9	14.4	12.6	12.4	15.7	14.7	15.4	14.6	12.7	12.6	14.0	14.7	14.2
Raisins, do	15.7	15.0	15.0	12.9	12.3	12.4	14.4	14.1	14.1	13.9	13.4	13.3	14.5	14.6	14.5
Bananas, do	8.1	7.3	8.8	9.3	8.9	8.8	9.9	10.1	9.5	9.2	8.4	8.7	8.6	8.1	8.1
Oranges, dozen	45.5	60.7	57.3	48.6	55.0	56.0	43.8	57.5	54.2	48.8	62.8	63.6	42.2	58.1	61.0

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] No. 2½ can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak...pound..	39.2	42.4	44.0	35.1	39.6	41.7	35.0	39.2	39.4	47.0	50.7	51.1	56.6	58.2	58.5
Round steak....do....	35.0	37.8	39.6	31.5	35.7	38.4	34.5	38.9	38.9	44.4	48.5	49.0	44.8	46.8	48.1
Rib roast.....do....	28.5	31.4	32.9	28.2	30.5	33.4	28.6	31.1	31.1	35.4	39.8	40.6	37.9	38.9	39.1
Chuck roast.....do....	24.4	28.0	28.6	23.8	26.7	28.2	22.5	25.6	25.6	24.7	29.2	30.8	27.6	29.6	30.3
Plate beef.....do....	14.5	17.9	18.2	14.2	16.7	17.8	18.2	20.5	20.5	12.9	18.4	17.8	16.1	17.3	17.4
Pork chops.....do....	30.2	34.0	33.7	31.5	35.0	36.3	37.7	35.0	35.0	35.4	35.8	34.5	35.5	35.4	35.5
Bacon, sliced....do....	45.9	42.3	43.2	47.3	46.4	45.5	47.3	41.5	40.4	45.3	42.8	43.3	47.5	44.1	44.3
Ham, sliced.....do....	50.5	45.9	46.4	53.8	47.5	47.5	51.9	48.3	47.1	53.9	51.7	52.5	59.8	58.8	58.7
Lamb, leg of....do....	42.8	43.3	44.0	37.4	37.3	40.4	40.6	40.0	40.0	42.1	43.1	42.8	42.8	45.1	46.3
Hens.....do....	30.8	36.3	32.2	31.1	36.9	34.7	35.6	32.6	32.6	37.6	37.8	38.0	40.9	42.5	42.0
Salmon, canned, red ...pound..	33.0	34.1	34.0	35.0	37.4	37.6	31.2	36.3	35.7	30.0	33.4	33.3	31.0	34.9	34.5
Milk, fresh.....quart..	11.0	11.0	11.0	11.0	12.0	12.0	17.8	18.0	18.0	15.0	15.0	15.0	16.0	16.0	16.0
Milk, evaporated .....15-16-oz. can..	11.2	10.7	10.7	11.6	11.6	11.5	11.7	10.8	11.1	11.2	10.8	10.8	12.0	11.7	11.9
Butter.....pound..	47.9	51.9	50.8	47.9	51.6	50.9	54.1	55.5	55.0	52.7	57.0	56.1	52.4	55.1	54.7
Oleomargarine (all butter substitutes) ...pound..	26.4	26.3	26.3	25.4	25.5	25.7	29.1	29.9	30.2	30.4	29.9	29.2	30.3	29.6	29.6
Cheese.....do....	35.0	37.0	37.0	35.2	36.9	36.4	35.6	36.1	36.7	39.7	40.0	40.0	39.4	40.6	41.4
Lard.....do....	19.0	18.3	18.3	17.9	18.4	18.3	19.2	18.7	18.6	19.2	18.5	18.6	18.4	18.5	18.7
Vegetable lard substitute.....pound..	26.5	26.4	26.5	26.7	27.4	27.4	20.4	20.7	20.6	25.7	25.6	25.6	25.6	26.2	26.1
Eggs, strictly fresh ...dozen..	27.3	34.5	33.9	26.9	34.8	34.8	29.6	30.8	34.8	41.2	46.3	47.1	45.3	50.2	51.0
Bread.....pound..	9.0	8.7	8.7	9.0	8.9	8.9	10.1	10.1	10.1	9.6	9.1	9.1	9.2	9.2	9.2
Flour.....do....	5.1	5.0	5.1	5.2	5.2	5.2	6.1	6.3	6.3	5.6	5.4	5.4	5.5	5.6	5.6
Corn meal.....do....	5.7	5.8	5.7	5.4	5.7	5.5	4.0	4.1	4.0	6.5	6.9	6.9	6.9	6.8	6.6
Rolled oats.....do....	8.4	8.2	8.4	8.1	8.0	8.0	8.3	8.5	8.5	8.3	8.2	8.3	9.1	9.4	9.3
Corn flakes .....8-oz. package..	9.3	9.3	9.3	10.6	9.7	9.7	9.7	9.2	9.3	9.5	8.8	8.7	10.1	9.9	9.9
Wheat cereal .....28-oz. package..	24.6	24.7	24.6	25.6	25.3	25.3	24.4	24.4	24.5	24.1	24.7	24.8	24.7	24.8	24.8
Macaroni.....pound..	17.7	17.6	17.5	19.1	18.4	18.4	20.9	21.1	21.1	20.9	21.4	21.4	22.1	22.2	22.3
Rice.....do....	10.5	10.2	10.2	10.5	9.7	9.5	9.8	8.8	8.7	10.5	9.6	9.3	10.8	10.3	10.3
Beans, navy....do....	8.3	12.2	12.9	9.3	12.8	13.4	8.8	11.5	11.5	9.7	12.4	12.4	9.5	11.4	11.7
Potatoes.....do....	5.5	2.7	2.6	5.5	2.5	2.2	6.6	4.1	2.8	5.6	4.0	3.4	5.7	3.1	2.8
Onions.....do....	9.5	7.7	5.8	9.1	8.5	7.1	7.5	7.4	5.4	9.3	7.9	6.2	9.8	8.2	7.3
Cabbage.....do....	10.9	8.7	5.8	11.4	9.1	6.7	6.9	5.8	4.0	8.7	7.6	6.6	10.6	9.3	6.7
Beans, baked .....No. 2 can..	11.0	11.1	11.4	11.8	12.3	12.3	10.8	10.3	10.2	10.7	10.4	10.6	11.1	11.7	11.7
Corn, canned....do....	15.4	15.7	16.2	13.6	15.0	15.1	15.9	16.1	15.6	15.0	17.8	17.3	18.7	18.2	17.8
Peas, canned....do....	15.2	15.8	15.9	13.8	14.9	15.0	15.9	15.7	15.7	15.9	17.6	17.4	19.0	19.8	20.4
Tomatoes, canned .....do....	13.2	13.1	12.9	13.3	13.4	13.4	10.8	10.2	9.9	11.5	10.5	10.5	12.9	13.1	13.1
Sugar.....pound..	7.1	6.9	7.0	7.6	7.2	7.6	7.3	7.1	7.3	6.9	6.9	6.9	7.3	7.1	7.1
Tea.....do....	70.8	70.2	69.8	60.3	61.9	62.8	77.3	78.5	78.3	62.8	60.2	60.2	57.4	59.5	59.2
Coffee.....do....	42.5	44.5	45.0	50.7	52.6	53.3	48.1	48.2	47.9	47.4	49.2	49.2	49.7	51.7	51.7
Prunes.....do....	15.4	13.8	13.9	15.6	13.9	14.1	16.2	13.8	13.6	14.5	12.8	13.0	15.7	13.3	13.8
Raisins.....do....	14.6	13.8	13.8	15.1	14.2	14.3	14.3	13.0	13.0	14.3	13.6	13.3	14.2	13.5	13.7
Bananas.....dozen..	[1] 9.4	[1] 8.8	[1] 9.0	[1] 11.3	[1] 10.2	[1] 9.6	23.9	24.3	24.4	36.7	38.0	38.0	33.6	33.8	34.2
Oranges.....do....	48.7	59.3	61.7	45.3	60.0	61.1	50.5	56.8	55.9	50.8	72.5	68.0	53.7	65.4	71.4

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	36.3	40.1	41.5	46.5	49.6	51.0	40.9	43.1	44.5	37.7	40.8	43.7	36.1	37.8	40.5
Round steak....do....	32.1	35.7	37.5	44.9	47.1	48.3	34.9	38.1	39.1	35.5	38.8	42.5	34.8	37.0	39.7
Rib roast.....do....	30.8	33.7	34.6	39.6	42.9	43.2	32.3	34.3	35.5	26.5	28.3	30.4	25.3	27.9	30.7
Chuck roast.....do....	21.5	24.5	24.3	25.5	28.4	30.3	23.5	25.5	26.0	22.3	25.1	28.3	21.8	25.0	27.7
Plate beef.....do....	17.5	18.9	18.9	20.1	23.6	23.3	15.7	17.3	18.0	13.3	14.9	15.7	14.6	17.1	18.3
Pork chops.....do....	34.5	35.9	34.5	38.8	38.7	38.6	35.7	33.2	32.5	33.6	34.2	32.9	31.7	32.2	31.0
Bacon, sliced....do....	48.0	43.1	41.1	47.7	44.9	45.8	44.4	42.3	41.8	50.2	45.0	45.2	50.0	43.8	43.8
Ham, sliced.....do....	51.8	48.3	48.0	59.9	54.8	57.7	49.4	45.5	46.0	56.3	48.2	49.6	53.3	49.2	49.2
Lamb, leg of.....do....	40.4	42.0	40.2	40.9	41.4	42.1	43.1	41.7	44.2	38.8	38.9	40.3	41.9	40.9	41.1
Hens.....do....	35.3	35.1	34.6	39.3	40.2	40.0	37.1	36.1	36.5	31.0	32.2	31.8	34.3	34.7	32.6
Salmon, canned, red ...pound..	36.9	35.7	35.3	30.4	34.6	34.4	33.9	36.4	35.9	34.8	36.0	36.2	33.1	35.2	35.8
Milk, fresh.....quart..	14.0	14.0	14.0	15.0	15.0	15.0	17.5	18.0	18.0	10.3	10.3	10.3	13.0	13.0	13.0
Milk, evaporated .....15–16 oz. can..	11.3	10.7	10.7	11.1	10.6	10.6	11.6	11.0	11.4	11.8	11.2	11.2	11.3	10.9	11.1
Butter.....pound..	51.9	56.3	54.7	53.0	55.6	53.8	56.2	58.9	58.4	50.6	49.5	49.1	49.0	51.1	49.2
Oleomargarine (all butter substitutes) ...pound..	28.7	28.2	28.3	28.7	27.6	27.9	28.7	25.0	25.0	26.1	26.0	25.8	27.9	27.6	27.7
Cheese.....do....	37.4	37.7	38.2	38.6	40.8	41.1	35.1	35.2	34.8	36.1	36.0	36.1	36.0	36.8	37.2
Lard.....do....	19.1	17.2	18.1	19.9	19.0	19.0	18.6	17.5	17.9	20.5	18.9	19.1	19.2	17.9	18.0
Vegetable lard substitute.....pound..	19.0	20.0	19.6	26.1	25.8	25.8	22.8	21.8	21.7	27.4	25.7	25.5	27.8	27.7	27.7
Eggs, strictly fresh ...dozen..	32.4	36.3	35.1	46.0	47.1	48.3	33.2	35.9	39.1	26.9	31.8	32.7	25.5	32.3	32.8
Bread.....pound..	8.7	8.9	8.9	9.7	8.8	8.8	9.9	9.9	9.9	10.1	9.6	9.7	10.0	10.0	10.0
Flour.....do....	6.7	7.0	7.1	5.6	5.5	5.5	5.6	5.6	5.8	4.6	4.7	4.7	5.3	5.4	5.4
Corn meal.....do....	4.1	4.0	4.0	6.5	6.6	6.5	4.5	4.6	4.7	4.6	4.5	4.5	4.9	4.9	5.0
Rolled oats.....do....	9.0	8.5	8.7	8.7	8.6	8.7	8.8	8.5	8.5	10.2	9.9	9.9	8.9	8.8	8.8
Corn flakes .....8-oz. package..	9.8	9.4	9.7	9.4	8.8	8.6	9.7	9.7	9.6	10.9	10.1	10.2	10.2	9.6	9.6
Wheat cereal .....28-oz. package..	24.7	24.8	24.8	24.0	24.2	24.2	25.2	25.3	24.8	28.0	28.0	27.9	26.3	26.1	26.1
Macaroni.....pound..	10.7	10.7	10.8	20.9	20.9	20.7	19.1	19.0	19.0	21.2	21.0	20.7	18.6	18.5	18.5
Rice.....do....	9.9	9.4	9.3	9.8	9.9	9.8	11.6	11.1	11.0	11.3	10.7	11.1	11.4	10.4	10.6
Beans, navy.....do....	8.2	10.6	10.9	10.2	12.2	12.5	8.0	11.1	11.3	10.0	12.6	12.7	8.7	12.5	13.7
Potatoes.....do....	6.3	3.7	3.0	5.4	4.2	3.0	6.2	4.1	3.3	6.5	2.7	2.4	6.2	2.6	2.4
Onions.....do....	5.1	5.6	3.9	9.1	7.7	6.3	8.1	7.1	6.8	9.3	8.0	6.4	9.9	9.4	7.2
Cabbage.....do....	7.5	5.1	4.3	9.3	8.6	5.2	6.5	7.8	3.5	11.7	8.8	5.2	13.2	9.7	6.4
Beans, baked .....No. 2 can..	10.8	11.0	10.9	10.6	11.1	11.3	9.7	9.9	9.9	13.4	13.3	13.3	11.1	10.3	10.3
Corn, canned....do....	15.3	15.3	15.2	13.8	15.2	15.4	15.0	15.0	14.8	16.3	16.0	16.4	14.8	15.0	15.0
Peas, canned....do....	16.9	17.4	17.3	14.8	15.6	15.6	19.1	17.0	17.5	15.5	15.8	15.9	17.1	16.8	16.3
Tomatoes, canned .....No. 2 can..	11.1	10.3	10.3	11.5	11.0	10.9	9.9	9.7	9.5	13.1	13.3	12.9	12.3	12.4	12.2
Sugar.....pound..	6.9	6.7	6.7	6.5	6.5	6.7	7.0	6.8	6.9	7.8	7.3	7.3	8.3	8.1	8.1
Tea.....do....	78.1	78.3	78.3	66.3	68.0	68.5	94.5	95.7	94.1	79.1	77.8	77.2	69.6	66.3	66.0
Coffee.....do....	35.6	35.5	35.9	44.6	46.3	46.0	47.8	48.8	49.0	53.6	53.7	53.7	48.0	48.9	48.6
Prunes.....do....	17.3	13.6	14.4	13.6	12.8	13.1	15.7	13.7	13.2	16.4	14.3	14.6	18.0	14.8	15.0
Raisins.....do....	13.8	12.6	12.7	14.0	13.8	13.3	14.2	13.8	13.8	15.6	14.6	14.4	14.3	13.8	13.8
Bananas.....dozen..	17.1	16.4	17.9	36.6	39.0	37.7	34.1	33.3	33.5	[1]10.5	[1]9.5	[1]10.3	[1]10.1	[1]7.9	[1]7.9
Oranges.....do....	51.3	60.3	61.3	56.6	73.8	75.2	56.7	58.1	61.3	44.8	52.2	57.0	48.1	55.8	56.0

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	[1] 57.7	[1] 61.4	[1] 63.0	47.6	51.2	53.6	[1] 62.9	[1] 67.1	[1] 68.3	31.2	35.5	35.5
Round steak, do	44.0	47.1	48.4	40.1	42.6	44.1	48.4	50.8	50.4	28.6	33.3	33.4
Rib roast, do	37.9	41.0	40.9	34.7	38.1	38.9	31.2	33.5	34.2	26.4	30.4	29.8
Chuck roast, do	27.0	31.0	32.4	26.7	30.5	31.4	22.0	24.8	25.7	20.0	23.8	23.4
Plate beef, do	13.3	17.7	17.6	13.5	17.7	18.2	18.5	20.8	20.4	14.4	19.0	18.6
Pork chops, do	39.0	40.2	39.6	38.4	38.1	36.6	35.4	35.5	35.5	34.9	31.8	32.5
Bacon, sliced, do	46.1	41.3	41.9	52.8	47.6	47.6	43.7	39.5	40.3	54.3	50.0	49.7
Ham, sliced, do	59.8	53.1	53.4	61.0	57.4	58.4	57.7	49.5	49.6	56.0	53.8	54.1
Lamb, leg of, do	44.2	43.8	45.2	44.8	44.4	45.2	41.0	43.1	44.6	37.8	38.3	37.6
Hens, do	39.5	42.2	41.3	43.2	45.2	45.3	41.8	41.9	41.9	32.1	34.9	34.3
Salmon, canned, red, do	27.8	32.5	32.2	30.1	33.8	33.6	30.2	35.4	35.9	33.7	34.8	34.8
Milk, fresh, quart	13.0	13.0	13.0	14.0	13.0	13.0	13.8	15.0	15.0	12.0	12.0	12.0
Milk, evaporated, 15–16 oz. can	11.6	11.4	11.6	11.3	10.3	10.4	12.5	12.2	12.2	10.7	10.2	10.0
Butter, pound	54.7	59.1	58.4	52.8	55.0	54.1	55.4	57.9	57.9	49.7	50.5	50.9
Oleomargarine (all butter substitutes), pound	28.3	28.6	28.8	30.4	28.3	28.4	27.5	26.6	26.6	28.9	26.4	26.6
Cheese, do	39.4	42.8	42.4	40.4	41.6	41.8	37.9	39.4	38.8	37.4	37.8	38.1
Lard, do	17.5	17.2	17.4	18.5	17.9	17.9	18.2	17.4	17.6	20.5	20.0	19.8
Vegetable lard substitute, do	25.7	24.5	24.8	27.5	27.2	27.2	25.7	26.2	26.2	28.7	28.4	28.7
Eggs, strictly fresh, dozen	35.1	41.7	42.5	36.6	41.8	42.3	40.4	43.6	45.8	29.1	31.2	34.3
Bread, pound	9.4	9.3	9.3	9.1	8.5	8.5	10.0	10.1	10.1	9.3	9.2	9.2
Flour, do	5.4	5.2	5.3	5.2	5.3	5.3	5.5	5.9	5.8	5.1	5.0	5.0
Cornmeal, do	4.7	5.1	5.1	5.9	6.0	6.2	5.1	5.1	5.1	5.5	6.0	6.0
Rolled oats, do	8.6	8.5	8.5	9.3	8.9	9.0	8.0	7.9	8.0	10.5	10.6	10.5
Corn flakes, 8-oz. package	9.6	9.3	9.1	10.0	9.6	9.6	10.1	9.5	9.6	10.1	9.6	9.7
Wheat cereal, 28-oz. package	24.7	25.2	25.2	25.1	25.0	24.9	25.7	25.4	25.4	26.7	27.0	26.8
Macaroni, pound	20.5	20.7	20.7	23.5	22.4	22.5	24.7	23.2	23.1	17.5	18.6	18.5
Rice, do	11.3	10.4	10.3	11.7	11.0	11.1	12.6	11.4	11.4	10.4	10.2	10.1
Beans, navy, do	9.0	10.6	11.1	8.7	11.9	12.0	9.5	12.0	12.4	10.2	13.2	12.8
Potatoes, do	6.0	4.2	3.6	6.0	3.4	2.9	5.2	2.5	1.9	4.4	2.0	2.6
Onions, do	8.7	6.9	5.4	9.4	7.8	6.5	9.0	7.9	6.2	8.6	5.9	4.8
Cabbage, do	8.7	8.4	5.5	10.6	8.4	6.3	10.6	7.1	6.1	9.1	8.3	6.0
Beans, baked, No. 2 can	10.7	10.8	11.1	12.3	12.7	12.8	14.3	15.4	15.4	12.5	11.9	11.8
Corn, canned, do	14.1	14.7	14.7	15.8	15.9	15.9	14.4	14.8	14.6	19.0	17.9	17.9
Peas, canned, do	14.8	15.5	15.6	16.7	17.4	17.1	17.8	17.9	17.9	18.4	17.6	17.3
Tomatoes, canned, do	12.2	11.3	11.3	12.1	11.8	11.9	12.6	12.2	11.7	[2] 17.2	[2] 15.2	[2] 15.4
Sugar, pound	6.7	6.7	6.7	7.6	7.4	7.3	7.3	7.1	7.2	7.5	7.1	7.1
Tea, do	67.7	68.2	68.7	83.7	80.9	81.3	62.2	61.8	62.2	76.9	78.6	79.5
Coffee, do	39.5	43.5	44.3	47.4	48.5	48.9	49.9	51.8	52.1	50.3	52.6	52.9
Prunes, do	13.3	12.4	12.5	16.7	14.1	14.4	14.5	11.3	11.3	11.0	11.0	10.6
Raisins, do	13.7	13.3	13.1	14.2	13.4	13.5	13.5	12.4	12.4	13.7	13.0	13.0
Bananas, dozen	30.2	31.2	29.9	37.7	37.5	35.6	[3] 10.7	[3] 10.3	[3] 9.6	[3] 12.2	[3] 10.2	[3] 9.7
Oranges, do	50.3	71.6	67.8	52.9	65.7	62.9	55.1	70.4	68.8	46.5	53.4	55.5

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] No. 2½ can.
[3] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	[1] 73.3	[1] 78.7	[1] 78.7	40.0	43.9	44.6	41.5	45.4	47.1	37.4	41.7	42.1
Round steak, do	50.3	53.7	55.1	35.6	38.8	39.6	34.7	38.0	39.4	36.6	40.0	40.7
Rib roast, do	39.1	41.9	42.4	32.5	33.7	34.4	30.9	34.1	34.6	30.3	33.8	34.4
Chuck roast, do	29.7	32.5	33.4	24.2	25.9	26.1	24.9	27.9	29.4	21.5	25.0	26.4
Plate beef, do	18.0	21.8	21.7	17.2	18.9	19.3	13.9	16.1	16.8	14.1	17.5	18.1
Pork chops, do	36.0	39.9	38.6	36.3	35.3	34.4	37.4	39.2	38.6	29.7	30.7	30.7
Bacon, sliced, do	42.6	40.5	40.7	44.3	40.8	40.1	42.3	37.8	36.9	42.5	39.8	40.5
Ham, sliced	58.5	53.9	54.2	46.4	44.5	44.3	55.6	50.4	50.7	51.0	50.8	51.3
Lamb, leg of, do	43.8	44.8	45.3	45.2	45.9	47.7	40.5	43.1	43.7	40.4	40.3	38.4
Hens, do	40.2	41.8	42.4	35.4	36.6	35.2	41.0	40.6	40.9	33.6	35.1	34.1
Salmon, canned, red, do	32.1	33.6	34.1	34.4	34.8	35.4	30.7	36.0	35.5	33.6	35.5	35.3
Milk, fresh, quart	14.3	14.5	14.5	14.0	14.0	14.0	12.5	12.5	12.5	13.0	13.0	13.0
Milk, evaporated, 15–16 oz. can	12.1	11.4	11.5	12.3	12.1	12.2	11.5	11.2	11.1	10.8	10.0	10.0
Butter, pound	51.9	55.7	54.0	58.5	59.4	59.4	51.5	54.0	53.6	52.7	55.0	54.2
Oleomargarine (all butter substitutes), pound	27.7	26.7	26.8	31.4	29.4	29.9	29.3	28.2	28.4	26.9	27.1	26.9
Cheese, do	36.7	38.6	38.4	36.1	37.2	37.3	34.7	38.9	38.6	35.6	36.7	36.4
Lard, do	18.2	17.1	17.3	18.0	17.0	17.1	17.4	16.7	17.0	15.0	14.8	14.6
Vegetable lard substitute, do	26.9	26.5	26.3	25.9	25.7	25.7	24.4	26.2	26.2	25.9	25.3	25.3
Eggs, strictly fresh, dozen	43.8	45.2	47.3	31.8	34.9	37.1	31.6	37.0	39.0	27.7	35.7	36.6
Bread, pound	9.1	9.0	9.0	9.4	9.1	9.2	9.0	9.1	9.1	9.9	9.6	9.6
Flour, do	6.0	5.8	5.9	5.4	5.4	5.6	5.5	5.7	5.6	5.2	5.4	5.4
Corn meal, do	4.9	5.0	5.1	4.8	4.8	4.8	5.4	6.3	6.3	4.5	4.3	4.2
Rolled oats, do	9.1	9.0	9.0	8.6	8.6	8.6	9.2	9.3	9.4	8.4	8.1	8.0
Corn flakes, 8-oz. package	9.8	9.4	9.4	9.8	9.8	9.4	9.5	9.2	9.2	9.2	8.8	8.8
Wheat cereal, 28-oz. package	25.1	24.8	24.8	25.6	26.0	26.0	24.5	25.1	25.6	24.7	24.7	24.8
Macaroni, pound	23.4	22.9	22.9	20.4	20.2	19.9	19.5	21.2	21.1	19.7	19.7	19.7
Rice, do	10.7	10.7	10.1	11.9	11.5	11.1	10.4	9.6	9.6	10.1	9.7	9.7
Beans, navy, do	9.5	13.0	12.9	8.8	11.8	13.0	8.7	12.9	12.7	8.3	12.0	12.3
Potatoes, do	5.5	2.9	2.5	6.8	4.1	4.0	5.8	2.7	2.3	6.6	3.1	3.3
Onions, do	9.1	7.6	6.1	9.0	7.9	7.3	8.3	7.7	6.4	7.7	6.7	5.6
Cabbage, do	10.2	8.8	5.5	5.3	9.1	5.5	9.8	9.0	6.8	9.6	8.1	4.5
Beans, baked, No. 2 can	11.5	10.8	10.8	10.1	10.3	10.3	10.5	10.2	10.2	10.4	10.3	10.3
Corn, canned, do	17.1	17.2	17.1	14.8	15.0	15.0	14.7	16.3	16.3	15.6	15.4	15.4
Peas, canned, do	18.3	19.2	18.3	19.3	17.7	17.8	16.9	17.7	17.7	15.0	14.9	14.8
Tomatoes, canned, do	13.2	12.9	12.9	10.5	10.5	10.6	13.1	14.1	14.3	11.5	10.5	10.5
Sugar, pound	7.2	6.9	7.0	7.2	7.0	7.0	6.9	6.6	6.8	7.2	7.2	7.3
Tea, do	61.2	60.1	60.1	91.4	90.3	89.8	69.8	69.0	69.0	76.1	74.3	74.3
Coffee, do	49.8	51.3	50.9	46.6	47.0	47.2	42.9	46.6	47.4	46.0	47.1	47.1
Prunes, do	14.4	12.9	12.9	15.4	14.0	14.0	15.8	14.2	13.5	18.0	14.4	14.4
Raisins, do	14.1	13.3	13.4	14.3	13.3	13.3	14.6	13.7	13.9	14.1	13.9	13.9
Bananas, dozen	31.3	33.6	32.1	37.1	36.8	36.4	35.0	35.0	31.7	31.5	31.7	31.7
Oranges, do	63.1	74.8	73.9	49.6	57.5	64.4	47.0	63.1	64.1	47.2	59.9	58.7

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	37.8	40.6	43.3	33.8	36.1	36.3	33.3	37.5	37.1	35.0	41.1	41.1
Round steak, do	32.7	36.0	37.2	31.3	33.9	35.6	30.5	35.1	34.5	28.0	35.6	34.4
Rib roast, do	30.9	34.1	34.9	26.2	28.0	28.2	30.2	33.5	33.1	27.5	31.7	30.6
Chuck roast, do	25.0	27.4	28.6	19.8	23.1	23.5	19.6	22.5	21.8	19.8	23.6	23.0
Plate beef, do	14.1	17.2	17.0	14.5	16.7	16.7	15.1	17.8	16.9	14.9	20.1	19.8
Pork chops, do	29.9	34.3	32.3	34.3	34.8	36.0	41.2	38.5	39.5	32.0	30.6	30.6
Bacon, sliced, do	45.0	42.2	43.6	48.1	44.2	44.8	58.9	54.5	54.6	43.3	38.5	38.2
Ham, sliced, do	50.3	44.7	46.4	59.3	51.9	51.9	64.3	59.7	60.0	45.9	42.0	41.5
Lamb, leg of, do	36.4	36.7	37.7	39.4	39.5	40.7	39.1	39.9	39.2	39.6	40.0	42.5
Hens, do	28.7	35.1	32.7	31.4	33.8	33.3	42.9	42.4	42.0	32.6	30.7	30.0
Salmon, canned, red, do	36.3	39.6	39.6	35.1	36.2	35.6	29.9	32.1	32.2	33.1	35.9	35.9
Milk, fresh, quart	11.0	12.0	12.0	10.3	10.0	10.0	14.0	14.0	14.0	17.0	17.0	16.0
Milk, evaporated, 15-16-oz. can	11.7	11.8	11.7	10.6	10.1	10.1	10.3	10.0	10.0	11.4	10.9	11.0
Butter, pound	46.8	50.2	49.0	48.5	47.7	47.6	51.5	51.0	52.6	53.1	56.8	55.2
Oleomargarine (all butter substitutes), pound	24.8	24.3	24.1	29.1	25.8	25.8	30.2	25.4	25.4	32.7	30.6	30.2
Cheese, do	35.8	36.5	36.4	30.7	30.6	30.9	38.8	41.2	40.8	35.8	34.8	35.2
Lard, do	18.4	18.4	18.5	21.5	20.1	20.3	23.0	22.2	22.2	18.8	17.4	16.9
Vegetable lard substitute, do	28.1	27.7	27.8	29.2	28.6	28.9	28.4	27.5	27.5	16.6	17.3	17.3
Eggs, strictly fresh, dozen	26.7	35.2	34.3	27.5	30.5	31.9	32.7	35.2	36.5	33.2	33.8	36.8
Bread, pound	10.0	9.3	9.3	9.7	9.7	9.7	9.5	9.5	9.5	10.8	10.6	10.6
Flour, do	5.3	5.3	5.3	4.2	4.3	4.3	5.8	5.9	5.9	6.6	6.7	6.9
Corn meal, do	5.2	5.2	5.3	5.5	5.6	5.6	6.5	6.9	6.9	3.7	3.7	3.7
Rolled oats, do	10.2	9.8	9.8	8.8	8.5	8.4	9.8	10.0	10.0	8.5	8.6	8.5
Corn flakes, 8-oz. package	10.9	10.0	10.1	11.3	10.2	10.0	10.1	9.7	9.6	9.9	9.5	9.5
Wheat cereal, 28-oz. package	26.4	26.1	26.1	25.5	25.3	25.5	25.4	25.2	25.2	24.3	24.3	24.3
Macaroni, pound	18.7	18.9	18.8	19.9	19.6	19.9	15.6	15.7	15.8	18.3	18.1	18.0
Rice, do	10.6	10.4	10.2	9.2	8.3	8.5	11.5	10.2	10.1	9.8	9.1	9.2
Beans, navy, do	9.5	12.6	13.2	9.1	11.1	11.3	9.9	11.8	11.9	9.6	11.8	11.3
Potatoes, do	5.1	2.4	1.8	6.6	1.8	2.2	5.5	3.1	3.0	6.4	4.1	3.6
Onions, do	10.1	8.1	6.6	8.4	6.3	7.0	7.7	6.0	5.3	8.6	8.5	7.6
Cabbage, do	12.8	9.1	5.9	9.8	8.6	8.5	-----	-----	-----	6.0	5.4	4.9
Beans, baked, No. 2 can	13.6	13.3	13.8	13.8	12.1	12.0	12.7	12.9	13.0	12.2	11.7	11.6
Corn, canned, do	14.3	15.0	15.1	14.2	14.0	13.8	17.7	17.6	17.5	15.2	15.2	14.9
Peas, canned, do	15.3	15.5	14.9	15.5	15.1	15.0	17.9	18.7	18.3	16.8	16.0	15.7
Tomatoes, canned, do	14.3	13.9	14.0	13.5	14.0	13.9	[1] 15.0	[1] 14.1	[1] 14.2	10.1	9.5	9.7
Sugar, pound	7.5	7.4	7.5	8.1	7.8	7.8	7.0	6.9	6.9	7.1	6.9	7.0
Tea, do	68.1	67.0	67.0	86.5	84.6	86.0	71.3	71.4	71.4	79.8	80.8	81.3
Coffee, do	51.5	52.8	53.8	55.1	53.4	53.4	52.0	53.5	54.1	45.2	45.9	45.9
Prunes, do	15.5	13.9	13.5	14.6	11.8	11.8	13.0	11.7	11.8	14.6	12.5	12.4
Raisins, do	15.6	14.5	14.5	13.6	12.8	13.0	13.2	11.8	12.0	14.5	13.5	13.5
Bananas, dozen	[2] 10.5	[2] 9.9	[2] 9.9	[2] 11.2	[2] 12.3	[2] 12.1	30.6	29.4	29.1	30.0	24.8	25.0
Oranges, do	47.0	64.5	61.1	44.7	54.5	55.6	47.8	58.7	58.2	43.5	54.1	58.2

[1] No. 2½ can.

[2] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

Article	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928		June 15, 1927	1928	
		May 15	June 15		May 15	June 15		May 15	June 15		May 15	June 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	51.1	55.9	58.9	35.0	39.1	39.3	37.5	43.5	44.8	46.6	48.7	51.9
Round steak, do	42.6	47.8	49.3	31.2	35.5	35.3	36.7	42.1	44.5	40.6	42.9	44.6
Rib roast, do	37.3	39.9	40.3	28.1	32.1	31.5	24.6	29.3	30.6	34.1	35.8	37.1
Chuck roast, do	27.5	31.4	33.0	20.6	24.6	24.2	22.1	27.2	28.4	24.8	27.9	29.6
Plate beef, do	12.8	15.8	16.1	15.9	19.1	18.8	14.0	19.3	19.0	13.8	16.8	18.1
Pork chops, do	40.0	37.7	38.5	36.8	36.2	37.0	30.4	33.3	31.8	37.6	37.2	36.6
Bacon, sliced, do	50.3	44.6	45.6	57.7	52.8	52.9	46.3	44.1	43.6	45.8	39.2	39.3
Ham, sliced, do	61.1	55.0	55.4	60.0	57.5	58.0	53.3	48.2	48.2	57.6	55.3	56.1
Lamb, leg of, do	47.8	47.0	50.0	37.4	40.9	39.5	43.3	46.1	45.8	44.4	46.6	45.3
Hens, do	44.5	43.8	43.2	33.6	35.0	34.9	34.2	34.4	34.1	39.7	40.3	40.4
Salmon, canned, red, do	34.5	36.0	35.8	34.4	36.8	37.3	34.8	37.2	37.6	31.4	34.5	35.0
Milk, fresh, quart	12.0	13.0	13.0	12.0	12.0	12.0	12.5	14.4	14.4	15.0	15.0	15.0
Milk, evaporated, 15-16 oz. can	11.9	11.9	11.8	10.7	10.1	10.1	11.8	11.7	11.7	11.9	11.9	11.9
Butter, pound	52.9	56.6	56.1	50.9	51.0	51.1	50.7	53.6	51.9	54.4	58.3	57.4
Oleomargarine (all butter substitutes), pound	28.0	26.8	27.3	28.3	25.3	25.0	28.2	28.4	28.5	28.9	27.1	27.2
Cheese, do	35.9	37.9	38.4	34.9	36.1	35.2	36.8	37.1	37.8	39.9	40.4	39.9
Lard, do	19.1	18.8	18.9	20.6	19.9	20.0	18.3	17.9	18.0	17.5	17.5	17.6
Vegetable lard substitute, do	26.1	25.6	26.2	27.6	26.9	27.6	27.5	27.6	27.6	24.6	24.7	24.7
Eggs, strictly fresh, dozen	35.9	39.8	41.1	31.7	34.0	34.4	26.3	34.6	33.3	35.2	39.8	41.1
Bread, pound	10.7	10.6	10.8	9.7	9.6	9.6	10.4	10.2	10.2	9.0	8.9	8.9
Flour, do	5.9	6.0	6.0	5.2	5.2	5.1	5.6	5.5	5.4	5.7	5.9	5.9
Corn meal, do	8.0	7.6	7.6	5.8	5.8	5.6	4.8	4.6	4.5	5.2	5.1	5.1
Rolled oats, do	9.7	9.8	9.9	9.0	8.7	8.7	10.4	9.7	9.7	9.4	9.2	9.1
Cornflakes, 8-oz. package	10.2	10.1	9.9	10.4	9.6	9.6	11.0	10.0	10.3	9.6	9.4	9.4
Wheat cereal, 28-oz. package	25.1	25.3	25.6	27.2	26.8	26.7	27.5	27.9	28.1	24.5	24.7	24.8
Macaroni, pound	22.9	22.8	22.9	18.2	17.6	17.7	18.9	19.0	19.2	22.5	22.9	22.6
Rice, do	11.0	10.6	10.2	12.0	10.1	10.3	10.9	10.4	10.2	11.4	10.6	10.8
Beans, navy, do	10.6	11.6	11.7	10.7	12.4	12.7	8.8	13.7	13.7	8.7	12.0	12.5
Potatoes, do	5.6	3.5	3.0	5.2	2.1	2.5	6.2	2.7	2.7	5.4	4.2	3.4
Onions, do	9.3	8.3	6.7	8.8	7.1	5.7	10.0	8.1	7.7	8.8	8.4	7.3
Cabbage, do	9.6	9.1	5.7	10.0	8.3	5.8	11.5	9.6	6.5	6.8	7.9	5.1
Beans, baked, No. 2 can	11.3	11.4	11.5	12.0	11.5	11.7	10.7	10.6	10.3	10.0	10.5	10.3
Corn, canned, do	16.6	16.9	17.5	16.9	18.1	18.2	14.7	15.4	15.0	14.4	15.4	15.1
Peas, canned, do	17.4	17.5	17.6	18.4	18.9	19.1	15.4	16.3	15.7	15.9	15.4	15.4
Tomatoes, canned, do	12.7	12.1	12.1	[1]17.2	[1]15.8	[1]15.8	13.8	13.6	13.3	10.1	10.5	10.3
Sugar, pound	7.2	7.1	7.2	7.4	7.1	7.1	7.9	7.8	7.9	7.1	6.9	7.1
Tea, do	71.2	70.3	68.1	76.5	76.1	75.7	84.5	83.8	85.0	91.7	95.0	94.3
Coffee, do	50.1	50.5	50.4	49.1	51.0	51.2	49.8	52.2	52.2	42.2	47.8	48.1
Prunes, do	16.2	14.5	14.1	13.7	12.2	12.2	15.4	13.9	14.4	16.6	14.2	14.1
Raisins, do	14.7	13.9	13.9	14.1	13.2	13.1	15.4	13.8	14.3	14.3	13.8	13.8
Bananas, dozen	33.2	32.5	32.3	[2]12.2	[2]9.2	[2]9.6	[2]9.5	[2]8.3	[2]7.7	31.3	28.3	29.1
Oranges, do	56.7	68.6	69.2	45.2	57.0	57.8	44.9	69.2	68.6	52.2	75.2	72.5

[1] No. 2½ can.

[2] Per pound.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in June, 1928, compared with the average cost in the year 1913, in June, 1927, and May, 1928. For 12 other cities comparisons are given for the one-year and the one-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JUNE, 1928, COMPARED WITH THE COST IN MAY, 1928, JUNE, 1927, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase, June, 1928, compared with 1913	Percentage decrease, June, 1928, compared with—		City	Percentage increase, June, 1928, compared with 1913	Percentage decrease, June, 1928, compared with—	
		June, 1927	May, 1928			June, 1927	May, 1928
Atlanta	56.5	4.9	1.5	Minneapolis	55.6	2.4	0.3
Baltimore	58.4	2.4	1.1	Mobile		4.3	2.0
Birmingham	57.2	1.6	1.7	Newark	47.2	2.1	1.4
Boston	51.6	3.7	1.4	New Haven	53.9	3.1	0.6
Bridgeport		4.1	0.9	New Orleans	50.0	3.0	1.6
Buffalo	56.7	3.3	0.1	New York	54.0	4.2	2.3
Butte		4.8	[1] 0.2	Norfolk		2.9	0.7
Charleston, S. C.	53.3	1.2	2.2	Omaha	46.1	8.5	0.2
Chicago	63.5	5.3	0.7	Peoria		7.0	0.7
Cincinnati	57.2	4.2	1.1	Philadelphia	58.2	1.6	1.3
Cleveland	54.3	3.8	1.0	Pittsburgh	51.8	5.9	1.1
Columbus		7.6	[1] 0.6	Portland, Me		3.3	0.9
Dallas	52.7	[1] 0.7	0.7	Portland, Oreg	38.1	1.8	[1] 1.1
Denver	39.1	6.0	[1] 0.2	Providence	51.8	3.8	1.1
Detroit	58.3	7.1	1.1	Richmond	61.2	2.5	0.0
Fall River	48.8	4.8	1.9	Rochester		3.2	0.7
Houston		3.2	1.4	St. Louis	56.4	4.6	0.2
Indianapolis	50.4	5.1	1.1	St. Paul		4.9	2.1
Jacksonville	41.7	5.9	[1] 0.3	Salt Lake City	32.0	7.1	[1] 1.6
Kansas City	51.1	3.3	0.5	San Francisco	47.7	2.7	[1] 0.1
Little Rock	46.0	0.0	1.6	Savannah		3.2	1.2
Los Angeles	37.8	3.9	1.4	Scranton	61.2	1.8	0.6
Louisville	53.9	2.0	1.6	Seattle	42.4	4.2	[1] 0.1
Manchester	50.0	2.3	1.7	Springfield, Ill		2.8	0.7
Memphis	46.4	1.0	0.8	Washington, D. C.	61.3	[1] 0.3	0.8
Milwaukee	54.8	4.2	0.8				

[1] Increase.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of June 99.5 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 46 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston, S. C., Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Fall River, Indianapolis, Jacksonville, Kansas City, Little Rock, Louisville, Manchester,

[3] For list of articles see note 1, p. 158.
[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Pittsburgh, Portland, Me., Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, Springfield, Ill., and Washington, D. C.

The following summary shows the promptness with which the merchants responded in June, 1928:

RETAIL PRICE REPORTS RECEIVED FOR JUNE, 1928

Item	United States	Geographic division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received	99.5	100	100	100	99.4	97.0
Number of cities in each section from which every report was received	46	14	8	14	7	3

Retail Prices of Coal in the United States [a]

THE following table shows the average retail prices of coal on January 15 and July 15, 1913, June 15, 1927, and May 15 and June 15, 1928, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928

City, and kind of coal	1913		1927	1928	
	Jan. 15	July 15	June 15	May 15	June 15
United States:					
Pennsylvania anthracite—					
Stove—					
Average price	**$7.99**	**$7.46**	**$15.06**	**$14.74**	**$14.89**
Index (1913=100)	**103.4**	**96.6**	**194.9**	**190.8**	**192.7**
Chestnut—					
Average price	**$8.15**	**$7.68**	**$14.70**	**$14.46**	**$14.61**
Index (1913=100)	**103.0**	**97.0**	**185.7**	**182.7**	**184.6**
Bituminous—					
Average price	**$5.48**	**$5.39**	**$8.89**	**$8.69**	**$8.72**
Index (1913=100)	**100.8**	**99.2**	**163.6**	**159.9**	**160.4**
Atlanta, Ga.:					
Bituminous	$5.88	$4.83	$7.37	$7.37	$7.37

[a] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

City, and kind of coal	1913		1927	1928	
	Jan. 15	July 15	June 15	May 15	June 15
Baltimore, Md.:					
Pennsylvania anthracite—					
Stove	[1] $7.70	[1] $7.24	[1] $15.50	[1] $15.00	[1] $15.25
Chestnut	[1] 7.93	[1] 7.49	[1] 14.75	[1] 14.50	[1] 14.75
Bituminous			8.11	7.89	7.86
Birmingham, Ala.:					
Bituminous	4.22	4.01	7.10	6.92	7.08
Boston, Mass.:					
Pennsylvania anthracite—					
Stove	8.25	7.50	15.75	15.50	15.50
Chestnut	8.25	7.75	15.50	15.25	15.25
Bridgeport, Conn.:					
Pennsylvania anthracite—					
Stove			14.50	14.50	14.50
Chestnut			14.50	14.50	14.50
Buffalo, N. Y.:					
Pennsylvania anthracite—					
Stove	6.75	6.54	13.79	13.46	13.71
Chestnut	6.99	6.80	13.38	13.06	13.31
Butte, Mont.:					
Bituminous			10.95	10.87	10.87
Charleston, S. C.:					
Bituminous	[1] 6.75	[1] 6.75	11.00	11.00	11.00
Chicago, Ill.:					
Pennsylvania anthracite—					
Stove	8.00	7.80	16.50	16.00	16.25
Chestnut	8.25	8.05	16.00	15.70	15.95
Bituminous	4.97	4.65	9.12	8.18	8.30
Cincinnati, Ohio:					
Bituminous	3.50	3.38	7.07	6.44	6.44
Cleveland, Ohio:					
Pennsylvania anthracite—					
Stove	7.50	7.25	15.05	15.00	15.00
Chestnut	7.75	7.50	14.55	14.50	14.45
Bituminous	4.14	4.14	8.94	8.36	8.39
Columbus, Ohio:					
Bituminous			7.00	6.22	6.25
Dallas, Tex.:					
Arkansas anthracite—					
Egg			14.50	15.00	14.00
Bituminous	8.25	7.21	11.71	12.10	11.70
Denver, Colo.:					
Colorado anthracite—					
Furnace, 1 and 2 mixed	8.88	9.00	15.75	15.72	15.75
Stove, 3 and 5 mixed	8.50	8.50	15.75	15.72	15.75
Bituminous	5.25	4.88	9.32	9.56	9.97
Detroit, Mich.:					
Pennsylvania anthracite—					
Stove	8.00	7.45	15.00	15.50	15.50
Chestnut	8.25	7.65	14.50	15.00	15.00
Bituminous	5.20	5.20	9.28	9.15	8.99
Fall River, Mass.:					
Pennsylvania anthracite—					
Stove	8.25	7.43	16.25	16.00	16.00
Chestnut	8.25	7.61	15.75	15.75	15.75
Houston, Tex.:					
Bituminous			11.60	11.60	11.60
Indianapolis, Ind.:					
Bituminous	3.81	3.70	6.96	6.69	6.84
Jacksonville, Fla.:					
Bituminous	7.50	7.00	12.00	13.00	13.00
Kansas City, Mo.:					
Arkansas anthracite—					
Furnace			12.90	12.40	12.20
Stove No. 4			14.67	14.17	13.83
Bituminous	4.39	3.94	7.60	7.56	7.47
Little Rock, Ark.:					
Arkansas anthracite—					
Egg			14.00	13.50	13.00
Bituminous	6.00	5.33	10.50	10.15	9.65
Los Angeles, Calif.:					
Bituminous	13.52	12.50	15.25	16.50	16.50
Louisville, Ky.:					
Bituminous	4.20	4.00	6.58	6.30	6.58

[1] Per ton of 2,240 pounds.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

City, and kind of coal	1913		1927	1928	
	Jan. 15	July 15	June 15	May 15	June 15
Manchester, N. H.:					
Pennsylvania anthracite—					
Stove	$10.00	$8.50	$17.08	$16.25	$16.50
Chestnut	10.00	8.50	16.83	16.00	16.25
Memphis, Tenn.:					
Bituminous	[2] 4.34	[2] 4.22	8.75	6.35	6.37
Milwaukee, Wis.:					
Pennsylvania anthracite—					
Stove	8.00	7.85	16.40	15.75	15.95
Chestnut	8.25	8.10	15.95	15.45	15.65
Bituminous	6.25	5.71	9.32	8.91	9.05
Minneapolis, Minn.:					
Pennsylvania anthracite—					
Stove	9.25	9.05	17.91	17.75	17.95
Chestnut	9.50	9.30	17.45	17.45	17.65
Bituminous	5.89	5.79	11.06	11.61	11.66
Mobile, Ala.:					
Bituminous	----------	----------	9.35	9.27	9.27
Newark, N. J.:					
Pennsylvania anthracite—					
Stove	6.50	6.25	13.80	13.50	13.70
Chestnut	6.75	6.50	13.25	13.00	13.25
New Haven, Conn.:					
Pennsylvania anthracite—					
Stove	7.50	6.25	14.55	14.40	14.60
Chestnut	7.50	6.25	14.55	14.40	14.60
New Orleans, La.:					
Bituminous	[2] 6.06	[2] 6.06	9.32	9.25	9.29
New York, N. Y.:					
Pennsylvania anthracite—					
Stove	7.07	6.66	14.08	14.25	14.46
Chestnut	7.14	6.80	13.79	13.75	13.96
Norfolk, Va.:					
Pennsylvania anthracite—					
Stove	----------	----------	14.50	14.00	14.00
Chestnut	----------	----------	14.50	14.00	14.00
Bituminous	----------	----------	8.57	8.55	8.55
Omaha, Nebr.:					
Bituminous	6.63	6.13	9.68	9.08	9.10
Peoria, Ill.:					
Bituminous	----------	----------	6.99	6.86	6.82
Philadelphia, Pa.:					
Pennsylvania anthracite—					
Stove	[1] 7.16	[1] 6.89	[1] 14.89	[1] 13.61	[1] 13.82
Chestnut	[1] 7.38	[1] 7.14	[1] 14.39	[1] 13.32	[1] 13.57
Pittsburgh, Pa.:					
Pennsylvania anthracite—					
Chestnut	[1] 8.00	[1] 7.44	14.88	14.75	14.56
Bituminous	[3] 3.16	[3] 3.18	5.85	5.29	5.19
Portland, Me.:					
Pennsylvania anthracite—					
Stove	----------	----------	16.32	16.32	16.32
Chestnut	----------	----------	16.32	16.32	16.32
Portland, Oreg.:					
Bituminous	9.79	9.66	12.61	13.35	12.54
Providence, R. I.:					
Pennsylvania anthracite—					
Stove	[4] 8.25	[4] 7.50	[4] 15.75	[4] 15.50	[4] 15.50
Chestnut	[4] 8.25	[4] 7.75	[4] 15.50	[4] 15.50	[4] 15.50
Richmond, Va.:					
Pennsylvania anthracite—					
Stove	8.00	7.25	15.00	13.83	14.00
Chestnut	8.00	7.25	15.00	13.83	14.00
Bituminous	5.50	4.94	9.21	8.28	8.40
Rochester, N. Y.:					
Pennsylvania anthracite—					
Stove	----------	----------	14.35	14.10	14.35
Chestnut	----------	----------	13.90	13.75	14.00
St. Louis, Mo.:					
Pennsylvania anthracite—					
Stove	8.44	7.74	16.65	16.35	16.40
Chestnut	8.68	7.99	16.20	15.95	16.15
Bituminous	3.36	3.04	7.12	5.88	5.91

[1] Per ton of 2,240 pounds.
[2] Per 10-barrel lot (1,800 pounds).
[3] Per 25-bushel lot (1,900 pounds).
[4] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JUNE 15, 1927, AND MAY 15 AND JUNE 15, 1928—Continued

City, and kind of coal	1913		1927	1928	
	Jan. 15	July 15	June 15	May 15	June 15
St. Paul, Minn.:					
Pennsylvania anthracite—					
Stove	$9.20	$9.05	$17.90	$17.75	$17.95
Chestnut	9.45	9.30	17.45	17.45	17.65
Bituminous	6.07	6.04	11.23	11.82	11.85
Salt Lake City, Utah:					
Colorado anthracite—					
Furnace, 1 and 2 mixed	11.00	11.50	18.00	18.00	18.00
Stove, 3 and 5 mixed	11.00	11.50	18.00	18.00	18.00
Bituminous	5.64	5.46	7.27	8.48	8.56
San Francisco, Calif.:					
New Mexico anthracite—					
Cerillos egg	17.00	17.00	25.00	25.00	25.00
Colorado anthracite—					
Egg	17.00	17.00	24.50	24.50	24.50
Bituminous	12.00	12.00	15.60	16.25	16.13
Savannah, Ga.:					
Bituminous	----------	----------	[2] 10.63	[2] 10.63	[2] 10.60
Scranton, Pa.:					
Pennsylvania anthracite—					
Stove	4.25	4.31	10.47	10.03	10.28
Chestnut	4.50	4.56	10.22	9.83	10.08
Seattle, Wash.:					
Bituminous	7.63	7.70	10.14	10.14	9.66
Springfield, Ill.:					
Bituminous	----------	----------	4.44	4.44	4.44
Washington, D. C.:					
Pennsylvania anthracite—					
Stove	[1] 7.50	[1] 7.38	[1] 15.25	[1] 14.86	[1] 15.11
Chestnut	[1] 7.65	[1] 7.53	[1] 14.73	[1] 14.49	[1] 14.74
Bituminous—					
Prepared sizes, low volatile	----------	----------	[1] 10.67	[1] 10.33	[1] 10.30
Prepared sizes, high volatile	----------	----------	[1] 8.75	[1] 8.63	[1] 8.63
Run of mine, mixed	----------	----------	[1] 7.78	[1] 7.60	[1] 7.60

[1] Per ton of 2,240 pounds.
[2] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

The following table shows for the United States both average and relative retail prices of Pennsylvania white-ash anthracite coal, stove and chestnut sizes, and of bituminous coal in January and July, 1913 to 1925, and for each month from January, 1927, through June, 1928. An average price for the year 1913 has been made from the averages for January and July of that year. The average price for each month has been divided by this average price for the year 1913 to obtain the relative price.

TABLE 2.—AVERAGE AND RELATIVE PRICES OF COAL FOR THE UNITED STATES ON SPECIFIED DATES FROM JANUARY, 1913, TO JUNE, 1928

Year and month	Pennsylvania anthracite, white ash				Bituminous	
	Stove		Chestnut			
	Average price	Relative price	Average price	Relative price	Average price	Relative price
1913—						
Average for year	$7.73	100.0	$7.91	100.0	$5.43	100.0
January	7.99	103.4	8.15	103.0	5.48	100.8
July	7.46	96.6	7.68	97.0	5.39	99.2
1914—						
January	7.80	100.9	8.00	101.0	5.97	109.9
July	7.60	98.3	7.78	98.3	5.46	100.6
1915—						
January	7.83	101.4	7.99	101.0	5.71	105.2
July	7.54	97.6	7.73	97.7	5.44	100.1
1916—						
January	7.93	102.7	8.13	102.7	5.69	104.8
July	8.12	105.2	8.28	104.6	5.52	101.6
1917—						
January	9.29	120.2	9.40	118.8	6.96	128.1
July	9.08	117.5	9.16	115.7	7.21	132.7
1918—						
January	9.88	127.9	10.03	126.7	7.68	141.3
July	9.96	128.9	10.07	127.3	7.92	145.8
1919—						
January	11.51	149.0	11.61	146.7	7.90	145.3
July	12.14	157.2	12.17	153.8	8.10	149.1
1920—						
January	12.59	162.9	12.77	161.3	8.81	162.1
July	14.28	184.9	14.33	181.1	10.55	194.1
1921—						
January	15.99	207.0	16.13	203.8	11.82	217.6
July	14.90	192.8	14.95	188.9	10.47	192.7
1922—						
January	14.98	193.9	15.02	189.8	9.89	182.0
July	14.87	192.4	14.92	188.5	9.49	174.6
1923—						
January	15.43	199.7	15.46	195.3	11.18	205.7
July	15.10	195.5	15.05	190.1	10.04	184.7
1924—						
January	15.77	204.1	15.76	199.1	9.75	179.5
July	15.24	197.2	15.10	190.7	8.94	164.5
1925—						
January	15.45	200.0	15.37	194.2	9.24	170.0
July	15.14	196.0	14.93	188.6	8.61	158.5
1926—						
January	(1)	(1)	(1)	(1)	9.74	179.3
July	15.43	199.7	15.19	191.9	8.70	160.1
1927—						
January	15.66	202.7	15.42	194.8	9.96	183.3
February	15.65	202.6	15.44	195.0	9.86	181.4
March	15.60	201.9	15.36	194.0	9.74	179.3
April	14.94	193.4	14.61	184.6	8.95	164.7
May	14.88	192.6	14.53	183.6	8.88	163.4
June	15.06	194.9	14.70	185.7	8.89	163.6
July	15.15	196.1	14.81	187.1	8.91	163.9
August	15.15	196.1	14.80	187.0	8.99	165.4
September	15.38	199.1	15.03	189.9	9.20	169.3
October	15.42	199.6	15.07	190.4	9.33	171.7
November	15.44	199.9	15.07	190.5	9.32	171.5
December	15.45	199.9	15.08	190.6	9.31	171.3
1928—						
January	15.44	199.8	15.08	190.6	9.30	171.1
February	15.44	199.9	15.09	190.6	9.28	170.8
March	15.43	199.8	15.08	190.5	9.26	170.4
April	14.95	193.4	14.64	185.0	8.94	164.6
May	14.74	190.8	14.46	182.7	8.69	159.9
June	14.89	192.7	14.61	184.6	8.72	160.4

[1] Insufficient data.

Retail Prices of Gas in the United States

THE net price per 1,000 cubic feet of gas for household use in each of 51 cities is shown in the following table. In Table 1 the average family consumption of manufactured gas is assumed to be 3,000 cubic feet per month. In cities where a service charge or a sliding scale is in operation, families using less than 3,000 cubic feet per month pay a somewhat higher rate than here shown, while those consuming more than this amount pay a lower rate. The figures here given are believed to represent quite closely the actual monthly cost of gas per 1,000 cubic feet to the average wage-earner's family. Prices for natural gas and for manufactured and natural mixed gas are shown in Table 2 for those cities where it is in general use. These prices are based on an estimated average family consumption of 5,000 cubic feet per month.

TABLE 1.—NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET, IN SPECIFIED MONTHS FROM APRIL, 1913, TO JUNE, 1928, BY CITIES

City	Apr. 15, 1913	Apr. 15, 1914	Apr. 15, 1915	Apr. 15, 1916	Apr. 15, 1917	Apr. 15, 1918	Apr. 15, 1919	Apr. 15, 1920	May 15, 1921	June 15, 1922	June 15, 1923	June 15, 1924	June 15, 1925	June 15, 1926	June 15, 1927	June 15, 1928
Atlanta	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.15	$1.15	$1.90	$1.65	$1.65	$1.55	$1.55	$1.55	$1.55	$1.55
Baltimore	.90	.80	.80	.75	.75	.75	.75	.75	.75	.92	.92	.85	.85	.85	.85	.85
Birmingham	1.00	.95	.95	.95	.95	.95	.95	.95	.88	.88	.80	.80	.80	.80	.80	.80
Boston	.81	.81	.80	.80	.80	.86	1.05	1.08	1.40	1.32	1.25	1.20	1.18	1.18	1.18	1.18
Bridgeport	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10	1.47	1.50	1.50	1.45	1.45	1.45	1.45	1.45
Buffalo	1.00	1.00	1.00	1.00	1.00	1.00	1.45	1.45	1.45	1.45	----	----	----	----	----	----
Butte	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Charleston, S. C.	1.10	1.10	1.10	1.10	1.00	1.10	1.10	1.25	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Chicago	.80	.80	.80	.80	.80	.72	.90	.87	1.20	1.07	1.07	1.02	1.02	1.02	1.02	.98
Cleveland	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80	1.25	1.25	1.25	1.25	1.25
Denver	.85	.80	.80	.80	.80	.85	.95	.95	.95	.95	.95	.95	.95	.95	.90	.90
Detroit	.75	.75	.75	.75	.75	.75	.79	.79	.85	.79	.79	.82	.82	.79	.79	.79
Fall River	.80	.80	.80	.80	.80	.95	.95	1.05	1.25	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Houston	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	1.09	1.09	1.05	----	----	----
Indianapolis	.60	.55	.55	.55	.55	.55	.60	.60	.90	1.20	1.15	1.15	1.10	1.05	1.05	.95
Jacksonville	1.20	1.20	1.15	1.15	1.15	1.25	1.25	1.50	1.75	1.65	1.65	1.97	1.97	1.97	1.92	1.92
Manchester	1.10	1.10	1.00	1.00	1.00	1.00	1.18	1.18	1.58	1.48	1.48	1.38	1.38	1.38	1.38	1.34
Memphis	1.00	1.00	1.00	1.00	.93	.93	.93	1.27	1.35	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Milwaukee	.75	.75	.75	.75	.75	.75	.75	.75	.90	.90	.86	.82	.82	.82	.82	.82
Minneapolis	.85	.80	.80	.77	.77	.77	.95	.95	1.28	1.02	1.05	1.01	.95	.97	.96	.94
Mobile	1.10	1.10	1.10	1.10	1.10	1.10	1.35	1.35	1.80	1.80	1.80	1.80	1.80	1.80	1.76	1.76
Newark	1.00	.90	.90	.90	.90	.97	.97	1.15	1.40	1.25	1.25	1.20	1.20	1.20	1.20	1.20
New Haven	.90	.90	.90	.90	.90	1.00	1.10	1.10	1.27	1.18	1.18	1.18	1.13	1.13	1.13	1.13
New Orleans	1.10	1.00	1.00	1.00	1.00	1.00	1.30	1.30	1.30	1.45	1.30	1.30	1.30	1.30	1.30	1.30
New York	.84	.84	.83	.83	.83	.83	.85	.87	1.40	1.31	1.23	1.23	1.23	1.23	1.24	1.25
Norfolk	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60	1.40	1.40	1.40	1.40	1.40	1.33	1.33	1.33
Omaha	1.15	1.15	1.15	1.00	1.00	1.15	1.15	1.15	1.47	1.18	1.18	1.18	1.08	1.08	1.08	1.00
Peoria	.90	.90	.90	.90	.85	.85	.85	.85	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Philadelphia	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Pittsburgh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	----	----	----	----	----	----	----	----	----
Portland, Me	1.10	1.00	1.00	1.00	1.00	1.00	1.40	1.40	1.85	1.65	1.55	1.55	1.55	1.50	1.42	1.42
Portland, Oreg	.95	.95	.95	.95	.95	.95	.95	.95	1.38	1.25	1.16	1.16	1.16	1.19	1.17	1.17
Providence	.85	.85	.85	.85	.85	1.00	1.30	1.30	1.42	1.42	1.22	1.22	1.17	1.17	1.13	1.13
Richmond	.90	.90	.90	.80	.80	.80	1.00	1.00	1.30	1.30	1.30	1.30	1.30	1.29	1.29	1.29
Rochester	.95	.95	.95	.95	.95	.95	.95	.95	1.18	1.10	1.05	1.00	1.00	1.00	1.00	1.00
St. Louis	.80	.80	.80	.80	.75	.75	.75	.85	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
St. Paul	.95	.90	.90	.85	.85	.85	.85	.85	1.00	1.00	.85	.85	.85	.90	.90	.90
Salt Lake City	.87	.87	.87	.87	.87	.87	1.15	1.35	1.57	1.57	1.57	1.57	1.54	1.53	1.52	1.51
San Francisco	.75	.85	.85	.85	.85	.85	.95	.95	1.05	1.02	.92	1.00	1.05	.95	.95	.94
Savannah	----	----	----	----	----	----	----	1.25	1.60	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Scranton	.95	.95	.95	.95	.95	1.15	1.30	1.30	1.70	1.60	1.60	1.50	1.50	1.50	1.40	1.40
Seattle	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Springfield, Ill	1.00	1.00	1.00	1.00	1.00	1.00	1.16	1.10	1.40	1.40	1.35	1.35	1.35	1.25	1.25	1.25
Washington, D.C.	.93	.93	.93	.93	.80	.90	.95	.95	1.25	1.05	1.05	1.00	1.00	1.00	1.00	1.00

TABLE 2.—NET PRICE PER 1,000 CUBIC FEET OF GAS BASED ON A FAMILY CONSUMPTION OF 5,000 CUBIC FEET IN SPECIFIED MONTHS FROM APRIL, 1913, TO JUNE, 1928, BY CITIES

Natural gas

City	Apr. 15, 1913	Apr. 15, 1914	Apr. 15, 1915	Apr. 15, 1916	Apr. 15, 1917	Apr. 15, 1918	Apr. 15, 1919	Apr. 15, 1920	May 15, 1921	June 15, 1922	June 15, 1923	June 15, 1924	June 15, 1925	June 15, 1926	June 15, 1927	June 15, 1928
Buffalo	$0.30	$0.30	$0.30	$0.30	$0.30	$0.30	$0.35	$0.35	$0.35	$0.42						
Cincinnati	.30	.30	.30	.30	.35	.35	.35	.35	.35	.50	$0.50	$0.50	$0.75	$0.75	$0.75	$0.75
Cleveland	.30	.30	.30	.30	.30	.30	.35	.35	.35	.40	.55	.55	.55	.60	.60	.60
Columbus	.30	.30	.30	.30	.30	.30	.30	.30	.30	.45	.45	.45	.55	.55	.48	.48
Dallas	.45	.45	.45	.45	.45	.45	.45	.45	.68	.68	.68	.68	.74	.74	.79	.79
Houston														.75	.75	.75
Kansas City	.27	.27	.27	.27	.30	.60	.80	.80	.90	.90	.95	.95	.95	.95	95	.95
Little Rock	.40	.40	.40	.40	.40	.40	.45	.45	.45	.45	.45	.65	.65	.65	.65	.65
Los Angeles															.91	.91
Louisville		.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
Pittsburgh	.28	.28	.28	.28	.28	.28	.35	.35	.45	.50	.50	.53	.60	.60	.60	.60

Manufactured and natural gas mixed

Buffalo											$0.62	$0.60	$0.60	$0.65	$0.65	$0.65
Los Angeles			$0.68	$0.68	$0.68	$0.68	$0.75	$0.75	$0.75	$0.73	.68	.68	.68	.68		

From the prices quoted on manufactured gas, average prices have been computed for all of the cities combined and are shown in the next table for April 15 of each year from 1913 to 1920, and for May 15, September 15, and December 15, 1921; March 15, June 15, September 15, and December 15, 1922, 1923, and 1924; and June 15 and December 15, 1925, 1926, and 1927, and June 15, 1928. These prices are based on an estimated average family consumption of 3,000 cubic feet.

Relative prices have been computed by dividing the price in each year by the price in April, 1913.

The price of manufactured gas in June, 1928, showed an increase of 27.4 per cent since April, 1913. From December, 1927, to June, 1928, there was a decrease of eight-tenths of 1 per cent in the price of gas.

TABLE 3.—AVERAGE AND RELATIVE NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS IN UNITED STATES, BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET IN SPECIFIED MONTHS OF EACH YEAR, 1913 TO 1928

Date	Average net price	Relative price	Date	Average net price	Relative price
Apr. 15, 1913	$0.95	100.0	Mar. 15, 1923	$1.25	131.6
Apr. 15, 1914	.94	98.9	June 15, 1923	1.24	130.5
Apr. 15, 1915	.93	97.9	Sept. 15, 1923	1.24	130.5
Apr. 15, 1916	.92	96.8	Dec. 15, 1923	1.25	131.6
Apr. 15, 1917	.91	95.8	Mar. 15, 1924	1.24	130.5
Apr. 15, 1918	.95	100.0	June 15, 1924	1.24	130.5
Apr. 15, 1919	1.04	109.5	Sept. 15, 1924	1.24	130.5
Apr. 15, 1920	1.09	114.7	Dec. 15, 1924	1.24	130.5
May 15, 1921	1.32	138.9	June 15, 1925	1.23	129.5
Sept. 15, 1921	1.31	137.9	Dec. 15, 1925	1.23	129.5
Dec. 15, 1921	1.30	136.8	June 15, 1926	1.23	129.5
Mar. 15, 1922	1.29	135.8	Dec. 15, 1926	1.22	128.4
June 15, 1922	1.27	133.7	June 15, 1927	1.22	128.4
Sept. 15, 1922	1.26	132.6	Dec. 15, 1927	1.22	128.4
Dec. 15, 1922	1.25	131.6	June 15, 1928	1.21	127.4

Retail Prices of Electricity in the United States

Explanation of Prices

THE following table shows for 51 cities the net rates per kilowatt-hour of electricity used for household purposes for specified months, in 1913, 1926, 1927, and 1928. For the cities having more than one tariff for domestic consumers the rates are shown for the schedule under which most of the residences are served.

Several cities have sliding scales based on a variable number of kilowatt-hours payable at each rate. The number of kilowatt-hours payable at each rate in these cities is determined for each customer according to the watts of installation, either in whole or in part, in the individual home. The number of watts so determined is called the customer's "demand."

In Baltimore the demand is the maximum normal rate of use of electricity in any half-hour period of time. It may be estimated or determined by the company from time to time according to the customer's normal use of electricity and may equal the total installation reduced to kilowatts.

In Buffalo the demand consists of two parts—lighting, 25 per cent of the total installation, but never less than 250 watts; and power, 2½ per cent of the capacity of any electric range, water heater, or other appliance of 1,000 watts or over and 25 per cent of the rated capacity of motors exceeding one-half horsepower but less than 1 horsepower. The installation is determined by inspection of premises.

In Chicago the equivalent in kilowatt-hours to 30 hours' use of demand has been estimated as follows: For a rated capacity of 475 to 574 watts, 11 kilowatt-hours; 575 to 674 watts, 12 kilowatt-hours; 675 to 774 watts, 13 kilowatt-hours; and 775 to 874 watts, 14 kilowatt-hours. Although the equivalent in kilowatt-hours to 30 hours' use of demand of from 1 to 1,500 watts is given on the printed tariff, the equivalent is here shown only for installations of from 475 to 874 watts, the connected load of the average home being as a rule within this range.

In Cincinnati the demand has been estimated as being 70 per cent of the connected load, excluding appliances.

In Cleveland Company A determined the demand by inspection as being 40 per cent of the connected load.

In Houston the demand is estimated as 50 per cent of the connected load, each socket opening being rated at 50 watts.

In New Orleans the demand in 1913 was the full connected load.

In New York the demand for Company C, when not determined by meter, has been computed at 50 per cent of total installation in residences, each standard socket being rated at 50 watts and all other outlets being rated at their actual kilowatt capacity.

In Omaha the demand in 1913 was the full connected load.

In Pittsburgh the demand has been determined by inspection, the first 10 outlets being rated at 30 watts each, the next 20 outlets at 20 watts each, and each additional outlet at 10 watts. Household utensils and appliances of not over 660 watts each have been excluded.

In Portland, Oreg., the demand for Company A has been estimated as one-third of the connected lighting load. Ranges, heating

devices, and small power up to a rated capacity of 2 kilowatts are not included.

For Company B the demand, when not based on actual measurement, has been estimated at one-third of the connected load, no demand being established at less than 233 watts.

In Springfield, Ill., the demand for Company A in December, 1913, was the active load predetermined as follows: 80 per cent of the first 500 watts of connected load plus 60 per cent of that part of the connected load in excess of the first 500 watts—minimum active load, 150 watts.

In Washington, D. C., the demand is determined by inspection and consists of 100 per cent of the connected load, excluding small fans and heating and cooking appliances when not permanently connected.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN DECEMBER, 1913, JUNE AND DECEMBER, 1926 AND 1927, AND JUNE, 1928, FOR 51 CITIES

City	Measure of consumption, per month	December, 1913	June, 1926	December, 1926	June, 1927	December, 1927	June, 1928
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Atlanta	First 100 kilowatt-hours	[1] 7.0	8.1	8.1	8.1	8.1	8.1
Baltimore	First 20 hours' use of demand [2]	[3] 8.5	8.0	8.0	7.0	7.0	7.0
	Next kilowatt-hours up to 800		4.0	4.0	4.0	4.0	4.0
Birmingham	First 100 kilowatt-hours	[4] 8.5	7.7	7.7	7.7	7.7	7.7
Boston:							
Company A	First 1,000 kilowatt-hours	[5] 10.0	8.5	8.5	8.5	8.5	8.5
Company B	do	[5] 10.0	8.5	8.5	8.5	8.5	8.5
Bridgeport	All current	9.0	6.5	6.5	6.5	6.0	6.0
Buffalo	First 60 hours' use of demand [2]	7.0	5.0	5.0	5.0	5.0	5.0
	Next 120 hours' use of demand [2]	5.0	4.0	4.0	4.0	4.0	4.0
	Excess	1.5	1.5	1.5	1.5	1.5	1.5
Butte	First 25 kilowatt-hours	[6] 9.5	8.0	8.0	8.0	8.0	8.0
	Next 25 kilowatt-hours		4.0	4.0	4.0	4.0	4.0
Charleston, S. C	First 50 kilowatt-hours	[7] 10.0	10.0	10.0	10.0	10.0	10.0
	Next 50 kilowatt-hours	8.0					
Chicago	First 3 killowatt-hours per room	[8] 10.0	[8] 8.0	[8] 8.0	[8] 8.0	[8] 8.0	7.0
	Next 3 killowatt-hours per room	[9] 5.0	[9] 5.0	[9] 5.0	[9] 5.0	[9] 5.0	5.0
	Excess	4.0	3.0	3.0	3.0	3.0	3.0
Cincinnati	First 30 kilowatt-hours	[8] 9.5	[8] 8.5	[8] 8.5	[8] 8.5	7.5	7.5
	Next 60 kilowatt-hours	[9] 6.7	[9] 6.5	[9] 6.5	[9] 6.5	5.0	5.0
	Excess	3.8	3.5	3.5	3.5	3.5	3.5
Cleveland:							
Company A	First 80 kilowatt-hours	[10] 10.0	[11] 5.0	[11] 5.0	[11] 5.0	[11] 5.0	5.0
	Excess	5.0					
Company B	All current. Service charge 30 cents per month additional.	[12] 8.0	3.0	3.0	3.0	3.0	3.0
	Next 690 kilowatt-hours	5.0					
Columbus	First 75 kilowatt-hours	[5] 7.0	7.0	7.0	7.0	7.0	7.0
Dallas	All current	[13] 10.0	[13] 6.0	[13] 6.0	[13] 6.0	[13] 6.0	6.0
Denver	First 15 kilowatt-hours	[8] 8.0	[8] 8.0	[8] 8.0	7.0	7.0	7.0
	Next 30 kilowatt-hours				6.0	6.0	6.0
	Excess				5.0	5.0	5.0
Detroit	First 3 kilowatt-hours per active room. Minimum, 3 rooms.	[14] 12.6	9.0	9.0	9.0	9.0	9.0
	Excess	3.6	3.6	3.6	3.6	3.6	3.6
Fall River	First 25 kilowatt-hours	[15] 9.5	8.5	8.5	8.5	8.5	8.0
	Next 75 kilowatt-hours		[16] 7.5	[16] 7.5	[16] 7.5	[16] 7.5	5.0
Houston	First 30 hours' use of demand [2]	[17] 12.4	7.2	7.2	7.2	7.2	7.2
	Excess	7.0	4.5	4.5	4.5	4.5	4.5
Indianapolis:							
Company A	First 50 kilowatt-hours	[18] 7.5	6.8	6.8	6.5	6.5	6.5
	Next 50 kilowatt-hours		[19] 6.3	[19] 6.3	6.0	6.0	6.0
Company B	First 50 kilowatt-hours	[18] 7.0	6.8	6.8			
	Next 150 kilowatt-hours		6.3	6.3			
Jacksonville	All current	7.0	7.0	7.0	7.0	7.0	7.0
Kansas City	First 5 kilowatt-hours per active room (minimum, 3 rooms).	[20] 9.9	7.5	7.5	7.5	7.0	7.0
	Next 5 kilowatt-hours per room		5.0	5.0	5.0	5.0	5.0
	Excess	4.5	2.5	2.5	2.5	2.5	2.5

For footnotes see end of table.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN DECEMBER, 1913, JUNE AND DECEMBER, 1926 AND 1927, AND JUNE, 1928, FOR 51 CITIES—Continued

City	Measure of consumption, per month	December, 1913	June, 1926	December, 1926	June, 1927	December, 1927	June, 1928
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Little Rock	First 200 kilowatt-hours	[5] 13.5	10.0	10.0	10.0	10.0	10.0
Los Angeles	First 50 kilowatt-hours	[6] 5.5	[6] 5.6	[6] 5.6	[6] 5.6	5.0	5.0
Louisville	1 to 149 kilowatt-hours	7.6	7.6	7.6	7.6	7.6	7.6
Manchester	First step: 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	[5] 11.4	[7] 12.0	[7] 12.0	[7] 12.0	[7] 12.0	11.0
	Next step: Number of kilowatt-hours equal to the first step.	-------	[21] 6.0	[21] 6.0	[21] 6.0	[21] 6.0	7.0
Memphis	First 6 kilowatt-hours per room	[5] 10.0	8.0	8.0	8.0	8.0	8.0
	Excess	-------	5.0	5.0	5.0	5.0	5.0
Milwaukee	First 9 kilowatt-hours for each of the first 6 active rooms and the first 7 kilowatt-hours for each active room in addition to the first 6.	[22] 11.4	[23] 7.6	6.7	6.7	6.7	6.7
	Additional energy up to 9 kilowatt-hours for each active room.	[24] 4.8	5.7	-------	-------	-------	-------
	Excess	3.8	3.1	2.9	2.9	2.9	2.9
Minneapolis	First 3 kilowatt-hours per active room, minimum, 2 rooms.	8.6	9.5	9.5	9.5	9.5	9.5
	Next 3 kilowatt-hours per active room	[25] 5.7	7.1	7.1	7.1	7.1	7.1
Mobile	First 50 kilowatt-hours	7.0	9.0	9.0	9.0	9.0	9.0
Newark	First 20 kilowatt-hours	[11] 10.0	9.0	9.0	9.0	9.0	9.0
	Next 30 kilowatt-hours	-------	[26] 8.0	[26] 8.0	8.0	8.0	8.0
New Haven	All current	9.0	6.5	6.5	6.5	6.0	6.0
New Orleans	First 20 kilowatt-hours, service charge, 25 cents per month additional.	[5] 13.0	9.1	9.1	9.1	9.1	9.1
	Next 30 kilowatt-hours	[25] 6.0	7.8	7.8	7.8	7.8	7.8
New York:							
Company A	First 1,000 kilowatt-hours	[27] 10.0	7.2	7.2	7.3	7.3	7.3
Company B	All current	9.5	9.5	9.5	9.5	9.5	9.5
Company C	First 60 hours' use of demand [2]	11.0	7.8	7.8	7.3	7.3	7.3
Norfolk	First 100 kilowatt-hours	9.0	[28] 9.0	[28] 9.0	8.5	8.5	8.5
Omaha	All current	[5] 11.4	5.5	5.5	5.5	5.5	5.5
	Next 125 kilowatt-hours	[25] 5.7	-------	-------	-------	-------	-------
Peoria	First 5 kilowatt-hours for each of the first 2 rooms, and 4 kilowatt-hours for each additional active room.	[29] 9.9	9.0	9.0	9.0	9.0	9.0
	Second 5 kilowatt-hours for each of the first 2 rooms, and 4 kilowatt-hours for each additional active room.	-------	6.0	6.0	6.0	6.0	6.0
Philadelphia:							
Company A	First 12 kilowatt-hours	[5] 10.0	8.0	8.0	8.0	8.0	8.0
	Next 36 kilowatt-hours	-------	7.0	7.0	7.0	7.0	7.0
Company B	First 20 kilowatt-hours	[11] 10.0	9.0	9.0	9.0	9.0	9.0
	Next 30 kilowatt-hours	-------	[26] 8.0	[26] 8.0	8.0	8.0	8.0
Pittsburgh	First 10 kilowatt-hours	[5] 10.0	[8] 8.0	[8] 8.0	[8] 8.0	[8] 8.0	8.0
	Next 20 kilowatt-hours	-------	[30] 5.5	[30] 5.5	[30] 5.5	[30] 5.5	5.5
Portland, Me	First 30 kilowatt-hours	[5] 9.0	[5] 8.0	[5] 8.0	[5] 8.0	8.0	8.0
	Next 70 kilowatt-hours	-------	-------	-------	-------	5.0	5.0
Portland, Oreg.:							
Company A	First 9 kilowatt-hours	7.6	7.6	7.6	7.6	7.6	7.6
	Next kilowatt-hours in excess of the first 9 kilowatt-hours until 100 use of demand has been reached.[2]	[31] 6.7	6.7	6.7	6.7	6.7	6.7
	Next 50 kilowatt-hours	[32] 5.7	2.9	2.9	2.9	2.9	2.9
Company B	First 13 kilowatt-hours	[33] 9.0	7.3	7.3	7.3	7.3	7.3
	Next kilowatt-hours: For an installation of 600 watts or less 7 kilowatt-hours will apply. For each 30 watts of installation in excess of 600 watts 1 additional kilowatt-hour will apply.	[34] 7.0	6.7	6.7	6.7	6.7	6.7
	Next 50 kilowatt-hours	[35] 4.0	2.9	2.9	2.9	2.9	2.9
Providence	All current, service charge, 50 cents per month additional.	[35] 10.0	6.8	6.9	6.8	6.5	6.5
Richmond	First 100 kilowatt-hours	9.0	[28] 9.0	[28] 9.0	8.5	8.5	8.5
Rochester	All current	8.0	8.0	8.0	8.0	8.0	8.0
St. Louis:							
Company A	First 9 kilowatt-hours per active room	[22] 9.5	6.7	6.7	6.7	6.7	6.7
	Excess	5.7	2.4	2.4	2.4	2.4	2.4
Company B	First 4 rooms or less, 18 kilowatt-hours; 5 or 6 rooms, 27 kilowatt-hours; 7 or 8 rooms, 36 kilowatt-hours.	[36] 9.0	6.7	6.7	6.7	6.7	6.7
	Excess	5.7	2.4	2.4	2.4	2.4	2.4

For footnotes see end of table.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN DECEMBER, 1913, JUNE AND DECEMBER, 1926 AND 1927, AND JUNE, 1928, FOR 51 CITIES—Continued

City	Measure of consumption, per month	December, 1913	June, 1926	December, 1926	June, 1927	December, 1927	June, 1928
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
St. Paul	First 3 kilowatt-hours per room	[37] 9.9	9.5	9.5	9.5	9.5	9.5
	Next 3 kilowatt-hours per room	------	7.1	7.1	7.1	7.1	7.1
	Excess	6.6	2.9	2.9	2.9	2.9	2.9
Salt Lake City	First 250 kilowatt-hours	9.0	8.1	8.1	8.1	8.1	8.1
San Francisco:							
Company A	First 200 kilowatt-hours: Service charge 40 cents per month additional.	[6] 7.0	[12] 9.0	[12] 9.0	[12] 9.0	[3] 5.0	5.0
	Next 800 kilowatt hours	------	[38] 6.0	[38] 6.0	[38] 6.0	[39] 2.5	4.0
Company B	First 200 kilowatt-hours: Service charge 40 cents per month additional.	[6] 7.0	[12] 9.0	[12] 9.0	[12] 9.0	[12] 9.0	5.0
	Next 800 kilowatt-hours	------	[38] 6.0	[38] 6.0	[38] 6.0	[38] 6.0	4.0
Savannah	First 100 kilowatt-hours	[12] 12.0	9.0	9.0	9.0	9.0	9.0
	Excess	6.0	------	------	------	------	------
Scranton	First 150 kilowatt-hours	[5] 9.0	10.0	10.0	10.0	10.0	10.0
Seattle:							
Company A	First 40 kilowatt-hours	[28] 6.0	5.5	5.5	5.5	5.5	5.5
	Next 200 kilowatt-hours	[23] 4.0	2.0	2.0	2.0	2.0	2.0
Company B	First 40 kilowatt-hours	[28] 6.0	5.5	5.5	5.5	5.5	5.5
	Next 200 kilowatt-hours	[23] 4.0	2.0	2.0	2.0	2.0	2.0
Springfield, Ill.:							
Company A	First 30 kilowatt-hours	[5] 10.0	6.0	6.0	6.0	6.0	6.0
	Next 70 kilowatt-hours	[9] 7.0	3.0	3.0	3.0	3.0	3.0
Company B	First 30 kilowatt-hours	------	6.0	6.0	6.0	6.0	6.0
	Next 70 kilowatt-hours	------	3.0	3.0	3.0	3.0	3.0
Washington, D C	First 120 hours' use of demand [1]	10.0	7.0	7.0	6.3	6.3	5.9

[1] First 150 kilowatt-hours.
[2] For determination of demand, see explanation of prices.
[3] First 50 kilowatt-hours.
[4] The gross rate is 10 cents per kilowatt-hour, with discounts of 10 per cent for a monthly consumption of 1 to 25 kilowatt-hours and 15 per cent for a monthly consumption of 25 to 150 kilowatt-hours. The average family used 25 or more kilowatt-hours per month.
[5] All current.
[6] First 100 kilowatt-hours.
[7] First 25 kilowatt-hours.
[8] First 30 hours' use of demand. For determination of demand, see explanation of prices.
[9] Next 30 hours' use of demand. For determination of demand, see explanation of prices.
[10] First 36 hours' use of demand. For determination of demand, see explanation of prices.
[11] First 500 kilowatt-hours.
[12] First 10 kilowatt-hours.
[13] First 800 kilowatt-hours,
[14] First 2 kilowatt-hours per active room.
[15] First 200 kilowatt-hours.
[16] Next 975 kilowatt-hours.
[17] First 2 kilowatt-hours per 16 candlepower of installation.
[18] All current. This rate applies to a 5-year contract, with a minimum charge of $1 per month. For a 1-year contract the rates per kilowatt-hour are 10 cents without a minimum charge, or 9⅜ cents with a minimum of $1 per month.
[19] Next 150 kilowatt-hours.
[20] First 3 kilowatt-hours per active room; minimum, 3 rooms.
[21] Next 50 kilowatt-hours.
[22] First 4 kilowatt-hours for each of the first 4 active rooms and the first 2½ kilowatt-hours for each additional active room.
[23] First 5 kilowatt-hours for each of the first 5 active rooms and the first 2½ kilowatt-hours for each additional active room.
[24] Additional energy up to 100 kilowatt-hours.
[25] Excess.
[26] Next 480 kilowatt-hours.
[27] First 250 kilowatt-hours.
[28] First 60 kilowatt-hours.
[29] 1 to 200 kilowatt-hours.
[30] Next 60 hours' use of demand. For determination of demand, see explanation of prices.
[31] Next 70 kilowatt-hours.
[32] Next 100 kilowatt-hours.
[33] First 6 per cent of demand. For determination of demand, see explanation of prices.
[34] Next 6 per cent of demand. For determination of demand, see explanation of prices.
[35] Service charge does not apply.
[36] For a house of 6 rooms or less, 15 kilowatt-hours; for a house of 7 or 8 rooms, 20 kilowatt-hours.
[37] First 30 kilowatt-hours.
[38] Next 40 kilowatt-hours.
[39] Next 125 kilowatt-hours.

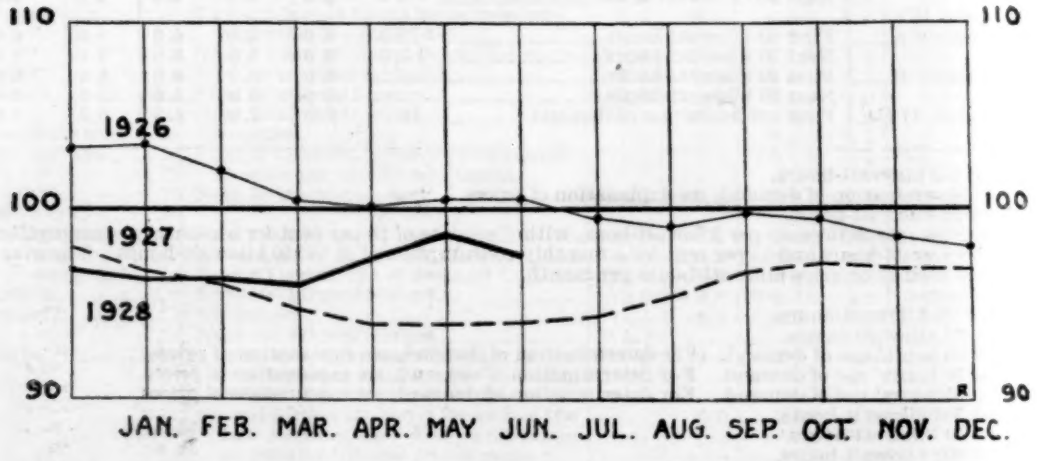
Index Numbers of Wholesale Prices in June, 1928

A DECLINE in the general level of wholesale prices from May to June is shown by information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, computed on prices in the year 1926 as the base and including 550 commodities or price series, stands at 97.6 for June compared with 98.6 for May, a decrease of 1 per cent. Compared with June, 1927, however, with an index number of 93.8, an increase of 4 per cent is shown.

Farm products as a group declined 2¾ per cent from the May level, due mainly to price decreases for barley, corn, rye, wheat, beef cows, calves, sheep and lambs, alfalfa and timothy hay, tobacco, onions, and potatoes. Oats, beef steers, and hogs, on the other hand, averaged higher than in May.

TREND OF WHOLESALE PRICES

[1926=100]



Foods decreased nearly 1 per cent and hides and leather products 2 per cent from the level for May, while minor decreases were reported for textile products, chemicals and drugs, and house-furnishing goods. In the group of miscellaneous commodities, including among others such important articles as cattle feed and automobile tires, there was a decrease of nearly 3½ per cent. Small price increases were recorded in the groups of fuel and lighting materials, metals and metal products, and building materials.

Of the 550 commodities or price series for which comparable information for May and June was collected, increases were shown in 106 instances and decreases in 172 instances. In 272 instances no change in price was reported.

Comparing prices in June with those of a year ago, as measured by changes in the index numbers, it is seen that farm products and hides and leather products were considerably higher while foods and textile products were somewhat higher. Decreases are shown for fuel and lighting materials, building materials, chemicals and drugs, house-furnishing goods, and miscellaneous commodities. Metals and metal products in June were slightly higher than in the corresponding month of 1927.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	1927, June	1928, May	1928, June	Purchasing power of the 1926 dollar in June, 1928 (cents)
All commodities	**93.8**	**98.6**	**97.6**	**102.5**
Farm products	96.5	109.8	106.7	93.7
Grains	109.7	127.0	119.9	83.4
Livestock and poultry	90.6	103.9	104.7	95.5
Other farm products	95.9	107.9	103.4	96.7
Foods	94.4	101.2	100.3	99.7
Butter, cheese, and milk	97.7	100.1	99.8	100.2
Meats	88.6	103.2	104.0	96.2
Other foods	97.1	100.3	98.1	101.9
Hides and leather products	107.3	126.3	123.7	80.8
Hides and skins	123.8	164.5	155.0	64.5
Leather	107.6	130.2	127.3	78.6
Boots and shoes	101.0	110.5	110.8	90.3
Other leather products	101.2	108.4	108.4	92.3
Textile products	94.3	96.6	96.3	103.8
Cotton goods	95.1	101.3	101.1	98.9
Silk and rayon	90.3	84.8	82.6	121.1
Woolen and worsted goods	97.1	100.9	101.2	98.8
Other textile products	93.0	84.5	85.9	116.4
Fuel and lighting	84.2	81.8	82.1	121.8
Anthracite coal	94.8	89.8	90.3	110.7
Bituminous coal	100.3	92.0	91.8	108.9
Coke	94.2	84.1	84.7	118.1
Manufactured gas	99.0	94.6	(*)	
Petroleum products	68.0	71.2	71.9	139.1
Metals and metal products	98.2	98.6	98.7	101.3
Iron and steel	96.1	94.8	94.2	106.2
Nonferrous metals	90.0	92.0	92.8	107.8
Agricultural implements	99.4	98.8	98.8	101.2
Automobiles	102.9	104.7	105.1	95.1
Other metal products	100.6	96.9	96.9	103.2
Building materials	94.6	93.5	93.9	106.5
Lumber	94.9	88.1	88.7	112.7
Brick	93.4	92.7	93.2	107.3
Cement	96.5	96.5	96.5	103.6
Structural steel	94.5	95.8	94.5	105.8
Paint materials	92.7	85.7	87.1	114.8
Other building materials	94.5	103.5	104.0	96.2
Chemicals and drugs	95.8	95.3	94.9	105.4
Chemicals	99.9	100.8	100.4	99.6
Drugs and pharmaceuticals	87.7	70.4	70.3	142.2
Fertilizer materials	98.3	95.5	94.0	106.4
Fertilizers	84.8	97.6	98.1	101.9
House-furnishing goods	98.0	97.8	97.0	103.1
Furniture	97.8	97.8	97.7	102.4
Furnishings	99.0	97.8	96.5	103.6
Miscellaneous	90.2	85.1	82.2	121.7
Cattle feed	117.8	160.4	148.8	67.2
Paper and pulp	92.0	89.8	89.2	112.1
Rubber	76.1	39.0	40.1	249.4
Automobile tires	78.3	69.8	62.2	160.8
Other miscellaneous	100.6	98.8	98.4	101.6
Raw materials	94.1	101.4	99.3	100.7
Semimanufactured articles	95.6	98.6	97.8	102.2
Finished products	93.4	97.1	96.7	103.4
Nonagricultural commodities	93.1	95.6	95.2	105.0

* Data not yet available.

COST OF LIVING

Changes in Cost of Living in the United States

THE cost of living in the United States in June, 1928, was 1.2 per cent lower than in December preceding and 2.0 per cent less than in June, 1927, according to the data compiled by the Bureau of Labor Statistics in its semiannual survey of cost of living in various cities. These data, together with the data that have been given in previous reports, are shown in the tables following. The information is based on actual prices secured from merchants and dealers for each of the periods named. The prices of food and of fuel and light (which include coal, wood, gas, electricity, and kerosene) are furnished the bureau in accordance with arrangements made with establishments through personal visits of the bureau's agents. In each city food prices are secured from 15 to 25 merchants and dealers, and fuel and light prices from 10 to 15 firms, including public utilities. All other data are secured by special agents of the bureau who visit the various merchants, dealers, and agents and secure the figures directly from their records. Four quotations are secured in each city (except in Greater New York, where five are obtained) on each of a large number of articles of clothing, furniture, and miscellaneous items. The number of houses and apartments for which basic rental figures are shown vary in the different cities approximately in proportion to population, the number per city, in round numbers, ranging from 400 to 2,200.

In Table 1 are given index numbers, with 1913 as the base or 100, showing changes in the total cost of living in the United States from 1913 to June, 1928.

TABLE 1.—INDEX NUMBERS SHOWING CHANGES IN COST OF LIVING IN THE UNITED STATES, 1913, TO JUNE, 1928

Date	Index numbers	Date	Index numbers	Date	Index numbers
Average, 1913	100.0	May, 1921	180.4	March, 1924	170.4
		September, 1921	177.3	June, 1924	169.1
December, 1914	103.0	December, 1921	174.3	September, 1924	170.6
December, 1915	105.1	March, 1922	166.9	December, 1924	172.5
December, 1916	118.3	June, 1922	166.4	June, 1925	173.5
December, 1917	142.4	September, 1922	166.3	December, 1925	177.9
December, 1918	174.4	December, 1922	169.5	June, 1926	174.8
June, 1919	177.3	March, 1923	168.8	December, 1926	175.6
December, 1919	199.3	June, 1923	169.7	June, 1927	173.4
June, 1920	216.5	September, 1923	172.1	December, 1927	172.0
December, 1920	200.4	December, 1923	173.2	June, 1928	170.0

Table 2 shows the per cent of change in cost of living from June, 1920, June, 1927, and December, 1927, respectively, to June, 1928, in 32 cities, and in the United States, as determined by a consolidation of the figures for the 32 cities.

In the period from June, 1920, which represents the peak, to June, 1928, all the 32 cities show decreases ranging from 16.2 per cent to 26.4 per cent. For the one-year period from June, 1927, to June, 1928, all the cities showed decreases ranging from 0.5 per cent to 4.2 per cent. For the preceding six months, December, 1927, to June, 1928, all but one of the cities showed decreases ranging from 0.2 per cent to 2.8 per cent. One city, Minneapolis, showed an increase of 0.3 per cent.

TABLE 2.—PER CENT OF DECREASE IN COST OF LIVING IN SPECIFIED CITIES FROM JUNE, 1920, JUNE, 1927, AND DECEMBER, 1927, TO JUNE, 1928

City	Per cent of decrease from—			City	Per cent of decrease from—		
	June, 1920, to June, 1928	June, 1927, to June, 1928	December, 1927, to June, 1928		June, 1920, to June, 1928	June, 1927, to June, 1928	December, 1927, to June, 1928
Atlanta	22.4	2.0	0.3	New Orleans	16.7	1.7	1.4
Baltimore	18.9	.9	.5	New York	20.4	1.9	2.6
Birmingham	19.9	1.0	1.7	Norfolk	22.8	1.4	1.1
Boston	21.8	2.0	2.8	Philadelphia	17.9	1.5	1.7
Buffalo	19.3	.6	.8	Pittsburgh	18.0	2.5	2.0
Chicago	20.1	3.2	1.6	Portland, Me	21.1	1.8	1.9
Cincinnati	17.7	1.9	.2	Portland, Oreg	24.9	2.1	1.5
Cleveland	20.0	2.2	1.5	Richmond	19.8	1.8	.9
Denver	23.6	3.0	1.5	St. Louis	19.5	2.7	1.2
Detroit	25.3	3.4	1.5	San Francisco	19.0	1.1	1.2
Houston	22.7	1.3	2.3	Savannah	25.2	1.1	.9
Indianapolis	21.3	2.6	.8	Scranton	16.2	1.0	1.2
Jacksonville	22.3	4.2	2.7	Seattle	21.2	2.1	.7
Kansas City	26.4	2.5	.6	Washington	20.7	.5	.7
Los Angeles	17.0	2.4	1.9				
Memphis	20.5	1.4	.8	Average, United States	21.5	2.0	1.2
Minneapolis	19.2	1.2	[1].3				
Mobile	21.0	1.1	1.2				

[1] Increase.

Table 3 shows the changes in each item of expenditure in 19 cities from December, 1914, to June, 1928. Figures for certain months are omitted from Tables 3 and 4 to curtail space.

In studying this and the following tables it should be borne in mind that the figures for the 19 cities in Table 3 are based on the prices prevailing in December, 1914, the figures for the 13 cities in Table 4 are based on the prices prevailing in December, 1917, while the figures for the United States, shown in Table 5, are a summarization of the figures in Tables 3 and 4, computed on a 1913 base.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928

Baltimore, Md.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	[1] 4.1	2.7	[1] 0.2	0.5	5.6	[1] 1.4	[1] 1.4
December, 1916	20.9	24.0	.9	9.1	26.4	18.5	18.5
December, 1917	64.4	52.1	3.0	25.5	60.8	51.3	51.3
December, 1918	96.4	107.7	13.8	46.0	122.3	78.7	84.7
June, 1919	91.1	128.9	16.8	37.1	134.6	82.8	84.0
December, 1919	92.5	177.4	25.8	48.1	167.0	99.4	98.4
June, 1920	110.9	191.3	41.6	57.6	191.8	111.4	114.3
December, 1920	75.6	159.5	49.5	79.0	181.9	112.9	96.8
May, 1921	43.4	123.2	63.0	70.9	147.5	111.8	77.4
December, 1921	46.9	88.6	64.7	85.5	123.7	108.6	73.2
June, 1922	39.9	78.9	65.4	84.8	113.3	104.4	67.6
December, 1922	46.1	80.5	66.9	94.9	116.6	102.6	70.9
June, 1923	46.5	81.4	69.6	91.6	127.5	103.8	72.0
December, 1923	50.6	81.8	71.9	93.5	130.2	105.2	74.8
June, 1924	44.0	78.3	72.4	84.8	129.4	109.9	71.9
December, 1924	53.0	76.2	72.2	88.7	125.7	107.1	74.8
June, 1925	57.7	76.0	72.0	85.3	122.8	111.0	77.3
December, 1925	66.2	76.2	72.2	90.9	122.1	111.6	81.2
June, 1926	62.2	73.0	71.3	89.8	112.8	111.2	78.4
December, 1926	63.0	72.5	70.6	87.3	110.5	112.3	78.6
June, 1927	56.7	71.3	69.9	82.2	106.9	112.9	75.3
December, 1927	56.7	68.4	68.0	85.5	104.8	112.3	74.5
June, 1928	52.9	68.1	66.7	82.0	103.2	118.7	73.7

Boston, Mass.

December, 1915	[1] 0.3	6.6	[1] 0.1	1.1	8.4	1.6	1.6
December, 1916	18.0	21.9	.1	10.5	26.3	15.7	15.7
December, 1917	45.8	47.5	[1] .1	29.2	58.4	38.1	38.1
December, 1918	74.9	117.5	2.8	56.6	137.6	62.0	70.6
June, 1919	67.9	137.9	5.1	55.0	153.7	64.8	72.8
December, 1919	80.8	192.4	12.2	63.2	198.7	81.1	92.3
June, 1920	105.0	211.1	16.2	83.6	233.7	91.8	110.7
December, 1920	74.4	192.7	25.8	106.0	226.4	96.6	97.4
May, 1921	41.9	150.3	29.8	97.8	171.2	96.2	74.4
December, 1921	50.4	106.3	33.8	98.5	136.9	93.0	70.2
June, 1922	32.5	96.7	34.4	92.5	124.2	89.5	59.6
December, 1922	44.9	92.0	36.7	99.9	133.6	87.8	65.1
June, 1923	39.7	93.0	40.2	88.8	150.5	89.2	63.5
December, 1923	48.8	92.6	47.0	97.0	148.2	93.0	69.4
June, 1924	37.9	91.2	50.7	90.7	136.9	88.0	63.2
December, 1924	47.8	89.1	52.4	93.7	138.1	85.9	67.3
June, 1925	44.5	88.9	52.9	90.4	136.9	86.3	65.8
December, 1925	60.6	87.8	54.0	107.2	136.7	91.0	74.7
June, 1926	51.5	85.9	53.2	94.4	133.1	91.0	69.4
December, 1926	56.6	85.3	53.5	98.7	129.6	92.3	71.9
June, 1927	50.5	82.9	53.2	92.5	125.5	91.5	68.1
December, 1927	54.4	80.2	52.4	96.5	124.4	91.3	69.5
June, 1928	45.0	80.2	52.2	90.4	123.1	90.2	64.8

Buffalo, N. Y.

December, 1915	2.4	9.0	1.2	1.3	.7.1	3.5	3.5
December, 1916	30.1	29.6	4.7	9.3	24.1	24.4	24.4
December, 1917	64.1	58.5	9.4	23.5	50.2	51.1	51.1
December, 1918	87.8	123.1	20.7	49.3	106.3	76.0	80.9
June, 1919	82.9	140.7	28.0	51.9	118.1	78.7	84.2
December, 1919	94.7	190.8	29.0	55.7	165.4	90.3	102.7
June, 1920	115.7	210.6	46.6	69.8	199.7	101.9	121.5
December, 1920	78.5	168.7	48.5	74.9	189.2	107.4	101.7
May, 1921	37.7	131.6	61.1	73.9	151.3	107.8	80.3
December, 1921	50.8	96.5	61.7	79.7	124.7	103.0	76.8
June, 1922	38.5	83.6	64.7	78.8	108.0	97.9	68.6
December, 1922	48.8	81.4	64.9	115.7	112.8	97.5	73.9
June, 1923	41.6	83.4	70.0	119.1	127.9	100.5	74.1
December, 1923	51.9	83.8	71.8	120.4	127.5	102.5	78.6
June, 1924	39.5	81.7	76.3	116.6	121.0	101.9	73.9
December, 1924	51.6	79.9	76.8	117.9	121.0	100.9	77.8
June, 1925	52.0	80.3	79.1	115.5	119.5	107.7	79.7
December, 1925	66.5	79.8	79.5	117.9	118.2	107.9	84.8
June, 1926	60.9	76.7	78.1	127.3	113.6	110.6	82.8
December, 1926	63.6	74.6	77.4	127.1	110.2	112.5	83.6
June, 1927	56.7	72.2	75.8	126.9	106.2	111.4	79.8
December, 1927	55.9	71.2	73.7	128.5	106.0	116.3	80.2
June, 1928	51.6	71.7	72.7	126.7	105.4	117.8	78.7

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

Chicago, Ill.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	2.7	7.5	[1] 0.1	[1] 0.9	5.9	3.0	3.0
December, 1916	25.2	24.2	.7	6.6	20.0	19.5	19.5
December, 1917	53.4	50.6	1.4	19.3	47.5	41.8	41.8
December, 1918	78.7	138.9	2.6	37.1	108.9	58.7	72.2
June, 1919	73.3	157.1	8.0	35.7	126.9	61.7	74.5
December, 1919	93.1	224.0	14.0	40.1	176.0	84.3	100.6
June, 1920	120.0	205.3	35.1	62.4	215.9	87.5	114.6
December, 1920	70.5	158.6	48.9	83.5	205.8	96.5	93.3
May, 1921	41.9	122.7	78.2	65.3	162.4	98.5	78.4
December, 1921	48.3	74.3	83.9	69.4	133.7	94.5	72.3
June, 1922	41.6	63.0	87.4	55.4	108.5	87.9	65.0
December, 1922	44.8	67.5	88.9	65.6	120.4	86.7	68.0
June, 1923	45.1	72.2	92.1	54.9	133.1	87.7	69.6
December, 1923	52.5	76.0	95.4	59.3	132.9	88.1	73.7
June, 1924	47.9	72.6	104.4	53.0	122.2	90.7	72.6
December, 1924	56.2	67.8	105.8	56.1	121.9	90.7	75.3
June, 1925	61.4	65.8	105.6	53.9	118.1	93.9	77.1
December, 1925	69.4	65.3	104.4	65.8	118.5	93.9	80.6
June, 1926	67.2	62.7	99.5	55.4	112.4	94.3	77.8
December, 1926	69.6	61.9	96.7	64.4	109.2	95.7	79.0
June, 1927	68.2	58.7	93.9	57.2	105.2	96.7	77.1
December, 1927	62.4	53.8	90.0	59.2	104.4	99.7	74.3
June, 1928	59.4	53.3	86.8	51.2	96.0	98.5	71.5

Cleveland, Ohio

December, 1915	1.4	2.0	0.1	0.3	4.7	1.4	1.4
December, 1916	26.4	18.0	.9	10.0	19.7	19.1	19.1
December, 1917	54.3	43.7	11.3	26.8	47.8	42.9	42.9
December, 1918	79.4	102.6	16.5	51.9	102.4	67.1	71.4
June, 1919	79.7	125.2	21.8	47.9	117.0	74.7	77.2
December, 1919	92.9	171.2	39.9	62.9	165.5	85.9	98.2
June, 1920	118.7	185.1	47.3	90.3	186.5	117.9	120.3
December, 1920	71.7	156.0	80.0	94.5	176.8	134.0	107.3
May, 1921	37.4	124.0	88.1	89.6	133.6	129.6	87.5
December, 1921	40.9	85.8	81.2	103.8	100.8	123.2	78.8
June, 1922	34.6	72.4	69.6	102.2	87.8	110.7	68.9
December, 1922	41.1	70.9	74.0	116.3	104.8	109.4	72.9
June, 1923	42.1	77.6	73.8	151.6	129.6	108.1	77.1
December, 1923	43.6	79.6	78.7	147.0	129.3	113.1	79.6
June, 1924	37.2	78.4	77.7	142.6	118.0	112.7	75.9
December, 1924	46.2	72.9	78.6	144.1	113.4	112.1	78.1
June, 1925	53.8	71.9	76.8	143.9	111.9	112.3	80.4
December, 1925	58.3	71.9	75.6	168.8	113.4	111.5	82.7
June, 1926	60.0	70.7	71.6	162.3	106.1	111.9	81.9
December, 1926	58.7	68.3	71.8	170.7	105.3	112.7	81.5
June, 1927	56.6	67.5	67.5	163.9	103.2	115.9	80.2
December, 1927	55.1	66.0	66.3	164.2	97.9	115.9	79.0
June, 1928	50.6	65.7	61.8	161.3	90.2	118.1	76.3

Detroit, Mich.

December, 1915	4.1	2.3	2.1	1.6	8.7	3.5	3.5
December, 1916	26.5	18.9	17.5	9.9	24.5	22.3	22.3
December, 1917	59.7	46.7	32.6	30.2	50.4	49.9	49.9
December, 1918	82.5	113.8	39.0	47.6	107.3	72.6	78.0
June, 1919	86.4	125.2	45.2	47.6	129.3	80.3	84.4
December, 1919	99.5	181.8	60.2	57.9	172.6	100.1	107.9
June, 1920	132.0	208.8	68.8	74.9	206.7	141.3	136.0
December, 1920	75.6	176.1	108.1	104.5	184.0	144.0	118.6
May, 1921	41.1	134.1	101.4	83.6	134.0	140.1	93.3
December, 1921	47.3	92.5	91.1	77.5	96.8	130.7	82.4
June, 1922	43.1	81.4	86.9	75.2	76.0	121.3	75.3
December, 1922	44.8	79.9	92.1	95.5	81.1	121.5	78.2
June, 1923	46.7	84.0	96.9	87.3	105.7	124.2	81.7
December, 1923	47.5	85.3	107.5	84.9	105.3	128.4	84.7
June, 1924	45.5	82.3	105.6	81.8	103.4	127.2	82.8
December, 1924	49.7	76.1	103.8	82.7	98.1	125.4	82.2
June, 1925	60.6	75.2	98.7	78.9	94.1	124.7	84.5
December, 1925	68.1	74.8	97.7	101.1	93.7	122.5	87.8
June, 1926	65.7	73.4	95.5	76.4	91.8	122.5	84.7
December, 1926	63.8	71.0	95.5	86.8	88.7	121.6	84.1
June, 1927	65.2	68.3	89.6	73.4	86.8	125.1	82.7
December, 1927	57.6	64.1	84.1	76.9	84.7	128.3	79.0
June, 1928	53.5	64.3	79.1	73.2	81.4	128.8	76.4

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

Houston, Tex.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	[1] 1.0	2.7	[1] 2.3	[1] 0.9	6.1	[1] 0.3	[1] 0.3
December, 1916	19.9	25.0	[1] 7.3	8.3	29.6	16.4	16.4
December, 1917	57.3	51.5	[1] 7.7	22.7	62.3	44.9	44.9
December, 1918	86.1	117.3	[1] 1.7	47.5	119.9	67.6	75.7
June, 1919	85.7	134.8	1.9	37.6	144.5	72.3	80.2
December, 1919	97.5	192.0	13.4	60.0	181.8	88.2	101.7
June, 1920	107.5	211.3	25.3	55.1	213.9	90.4	112.2
December, 1920	83.2	187.0	35.1	74.2	208.2	103.9	104.0
May, 1921	45.6	143.4	39.4	46.0	173.7	100.8	79.7
December, 1921	50.1	104.9	39.8	39.4	148.2	99.0	73.6
June, 1922	38.9	98.4	38.5	32.9	133.7	94.0	65.9
December, 1922	45.0	98.2	37.3	39.2	140.4	93.0	68.4
June, 1923	41.2	100.4	36.7	36.5	150.2	91.5	67.2
December, 1923	46.4	102.6	36.4	55.8	148.2	93.2	70.6
June, 1924	37.3	100.8	34.9	45.0	143.7	89.5	65.0
December, 1924	54.4	95.6	34.7	44.3	143.0	88.0	70.5
June, 1925	57.3	95.6	34.3	38.7	142.5	87.8	71.1
December, 1925	65.8	92.5	33.0	45.2	143.2	88.0	74.3
June, 1926	55.0	91.2	32.9	38.2	138.6	87.4	69.2
December, 1926	59.8	88.9	32.6	43.7	137.9	86.8	70.6
June, 1927	50.4	86.8	32.2	32.8	136.7	86.6	66.3
December, 1927	52.5	86.2	31.8	34.3	134.1	91.8	67.9
June, 1928	45.6	85.8	30.4	29.2	132.0	89.7	64.1

Jacksonville, Fla.

December, 1915	[1] 0.3	10.5	[1] 6.9	[2]	15.1	1.3	1.3
December, 1916	17.6	33.7	[1] 18.2	2.3	43.4	14.7	14.7
December, 1917	50.8	71.9	[1] 18.7	15.1	73.7	41.6	41.6
December, 1918	76.2	130.5	5.9	55.2	126.5	60.5	71.5
June, 1919	74.2	139.8	9.7	49.2	140.0	65.9	77.5
December, 1919	80.9	217.2	22.0	64.1	186.2	80.9	101.5
June, 1920	90.1	234.0	28.9	72.6	224.2	102.8	116.5
December, 1920	65.6	209.3	34.1	92.6	222.3	105.6	106.2
May, 1921	32.6	167.5	36.5	80.7	182.7	107.5	85.8
December, 1921	40.6	117.9	38.3	68.9	134.9	99.3	75.1
June, 1922	30.6	99.9	35.3	58.9	115.3	95.5	65.7
December, 1922	34.8	99.3	35.1	65.7	127.1	94.7	67.8
June, 1923	32.0	101.1	34.3	63.6	137.9	95.3	67.7
December, 1923	39.9	104.5	33.4	75.1	139.4	96.6	71.9
June, 1924	30.2	102.7	33.3	72.1	132.9	95.0	67.3
December, 1924	40.0	94.6	33.5	72.9	132.4	99.1	70.4
June, 1925	41.8	94.0	33.5	69.3	134.0	99.3	70.9
December, 1925	58.3	93.6	55.3	87.1	135.6	105.3	81.7
June, 1926	53.4	93.4	66.6	95.3	134.7	105.5	81.8
December, 1926	53.5	90.9	69.9	91.2	128.1	105.7	81.3
June, 1927	45.0	88.0	57.2	87.8	126.0	104.5	75.7
December, 1927	41.3	85.4	51.2	84.0	124.6	104.5	73.0
June, 1928	36.4	85.0	32.3	74.4	119.2	105.1	68.3

Los Angeles, Calif.

December, 1915	[1] 4.1	2.8	[1] 2.7	0.4	6.3	[1] 1.9	[1] 1.9
December, 1916	.4	14.3	[1] 2.5	2.3	23.1	7.7	7.7
December, 1917	33.4	45.0	[1] .6	10.4	56.4	28.9	28.9
December, 1918	61.8	109.1	4.4	18.3	118.5	52.0	58.0
June, 1919	60.7	123.3	8.7	18.6	134.2	59.1	65.1
December, 1919	71.0	167.6	26.8	35.3	175.5	76.9	85.3
June, 1920	90.8	184.5	42.6	53.5	202.2	86.6	101.7
December, 1920	62.7	166.6	71.4	53.5	202.2	100.6	96.7
May, 1921	33.2	127.4	85.3	52.7	156.6	96.8	78.7
December, 1921	38.4	94.3	90.1	52.7	143.2	99.6	76.4
June, 1922	30.6	81.3	95.6	39.1	128.8	103.8	72.5
December, 1922	39.4	78.0	94.8	35.6	138.1	101.2	74.5
June, 1923	36.2	82.5	97.7	33.7	153.6	100.8	75.1
December, 1923	42.1	83.0	100.9	34.1	152.0	104.2	78.8
June, 1924	35.2	81.4	99.4	33.6	136.1	105.4	75.1
December, 1924	38.8	80.4	93.3	34.4	137.7	104.2	75.4
June, 1925	44.1	79.0	83.6	34.0	133.9	108.9	76.9
December, 1925	48.7	77.7	73.7	34.4	133.7	110.6	77.4
June, 1926	39.9	75.7	67.4	34.1	126.7	104.7	71.2
December, 1926	44.7	75.2	61.7	34.8	123.8	105.7	72.2
June, 1927	40.4	74.0	59.9	61.0	120.4	108.2	71.5
December, 1927	40.4	71.6	57.7	56.8	118.6	108.0	70.6
June, 1928	34.9	71.4	54.1	56.5	110.7	107.2	67.4

[1] Decrease. [2] No change.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

Mobile, Ala.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	[1] 1.0	2.0	[1] 1.9	[2]	4.1	[1] 0.4	[1] 0.4
December, 1916	19.9	9.0	[1] 4.3	8.8	15.3	13.8	13.8
December, 1917	57.3	38.8	[1] 3.6	27.1	42.8	43.2	43.2
December, 1918	80.6	86.0	11.2	57.1	108.3	72.4	71.4
June, 1919	83.6	94.0	11.9	66.6	113.9	75.3	76.6
December, 1919	98.4	123.7	29.6	75.6	153.3	87.0	94.5
June, 1920	110.5	137.4	34.6	86.3	177.9	100.3	107.0
December, 1920	73.5	122.2	53.6	122.3	175.4	100.7	93.3
May, 1921	39.1	90.6	53.3	102.1	140.7	96.9	70.8
December, 1921	42.4	57.7	49.9	98.2	116.9	94.3	63.6
June, 1922	33.2	49.7	47.7	84.4	97.8	87.5	55.3
December, 1922	39.1	50.8	43.8	96.4	97.9	91.0	58.8
June, 1923	37.7	51.8	42.5	93.3	114.0	89.8	58.6
December, 1923	44.7	55.4	42.6	98.1	114.8	91.3	62.6
June, 1924	33.4	54.3	41.4	91.4	109.3	93.7	58.0
December, 1924	49.7	53.4	40.9	90.2	107.2	94.3	63.9
June, 1925	50.3	52.0	40.1	85.6	104.3	95.5	63.9
December, 1925	59.0	49.4	40.4	89.1	103.7	102.0	68.5
June, 1926	53.1	49.5	39.7	94.6	100.8	102.2	66.2
December, 1926	58.0	48.8	40.5	97.7	96.4	102.2	68.1
June, 1927	52.0	47.6	40.4	90.4	97.2	102.4	65.2
December, 1927	51.1	47.6	41.9	92.1	97.2	104.0	65.5
June, 1928	45.4	47.5	41.0	90.0	93.3	107.3	63.5
New York, N. Y.							
December, 1915	1.3	4.8	[1] 0.1	[1] 0.1	8.4	2.0	2.0
December, 1916	16.3	22.3	[1] .1	11.0	27.6	14.9	14.9
December, 1917	55.3	54.2	2.6	19.9	56.5	44.7	44.7
December, 1918	82.6	131.3	6.5	45.5	126.5	70.0	77.3
June, 1919	75.3	151.6	13.4	45.4	136.6	75.1	79.2
December, 1919	91.0	219.7	23.4	50.6	172.9	95.8	103.8
June, 1920	105.3	241.4	32.4	60.1	205.1	111.9	119.2
December, 1920	73.5	201.8	38.1	87.5	185.9	116.3	101.4
May, 1921	42.5	159.5	42.2	95.9	156.5	117.6	81.7
December, 1921	51.8	117.8	53.7	90.7	132.0	116.9	79.3
June, 1922	40.0	103.0	55.7	89.0	118.3	112.8	70.7
December, 1922	49.5	98.3	56.7	95.7	121.6	111.6	74.2
June, 1923	44.4	100.7	59.4	89.1	130.3	110.8	72.6
December, 1923	52.0	102.7	62.4	94.2	131.5	113.5	77.3
June, 1924	41.1	100.7	64.5	88.8	121.4	115.0	72.5
December, 1924	50.0	97.7	67.1	93.3	119.4	116.7	76.5
June, 1925	48.9	97.5	67.8	91.0	110.6	116.9	75.8
December, 1925	62.6	95.9	69.5	126.0	110.4	118.2	83.2
June, 1926	56.0	94.7	69.5	95.9	106.6	117.3	78.5
December, 1926	59.1	93.7	70.2	96.1	106.0	117.5	80.0
June, 1927	54.0	92.9	70.2	92.2	102.5	119.0	77.8
December, 1927	57.5	91.4	70.2	96.0	102.9	118.8	79.1
June, 1928	47.5	90.3	69.3	94.4	97.8	118.6	74.4
Norfolk, Va.							
December, 1915	0.8	0.8	0.1	[2]	0.6	0.6	0.6
December, 1916	22.4	6.0	[1] 1.7	17.0	8.7	14.7	14.7
December, 1917	63.9	31.6	[1] 1.7	33.3	39.0	45.2	45.2
December, 1918	86.2	94.6	39.0	74.6	105.5	76.8	80.7
June, 1919	89.8	104.8	46.5	69.7	110.7	83.7	87.1
December, 1919	91.5	158.4	63.3	89.9	143.6	97.5	107.0
June, 1920	107.6	176.5	70.8	110.6	165.0	108.4	122.2
December, 1920	76.3	153.6	90.8	128.9	160.5	106.3	109.0
May, 1921	45.4	121.6	94.6	97.3	129.0	106.3	88.1
December, 1921	43.4	90.2	93.4	91.6	106.1	109.3	79.2
June, 1922	33.5	77.6	88.1	87.7	88.4	100.8	69.5
December, 1922	38.6	73.2	77.2	106.5	89.1	99.6	69.9
June, 1923	36.9	79.1	73.0	102.1	101.0	102.2	71.1
December, 1923	40.7	80.8	67.0	96.9	103.8	104.4	72.4
June, 1924	33.1	78.6	64.2	94.4	100.1	103.0	68.4
December, 1924	46.0	75.4	59.4	99.1	102.1	103.4	72.1
June, 1925	47.9	74.7	58.4	96.7	96.0	103.4	71.9
December, 1925	60.8	74.0	53.0	107.9	96.8	103.8	76.4
June, 1926	56.0	73.0	52.1	102.1	93.7	100.5	73.1
December, 1926	58.7	72.8	49.2	109.6	90.4	103.7	74.6
June, 1927	54.7	71.1	45.9	96.8	88.9	114.9	73.9
December, 1927	55.5	70.9	43.6	98.2	88.5	112.5	73.4
June, 1928	50.2	71.6	41.7	95.6	85.7	114.6	71.5

[1] Decrease. [2] No change.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

Philadelphia, Pa.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	0.3	3.6	[1] 0.3	[1] 0.8	6.9	1.2	1.2
December, 1916	18.9	16.0	[1] .7	5.4	19.9	14.7	14.7
December, 1917	54.4	51.3	2.6	21.5	49.8	43.8	43.8
December, 1918	80.7	111.2	8.0	47.9	107.7	67.5	73.9
June, 1919	75.5	135.9	11.3	43.3	117.8	71.2	76.2
December, 1919	87.2	190.3	16.7	51.3	162.8	88.6	96.5
June, 1920	101.7	219.6	28.6	66.8	187.4	102.8	113.5
December, 1920	68.1	183.5	38.0	96.0	183.4	122.3	100.7
May, 1921	37.8	144.7	44.2	85.6	135.5	119.2	79.8
December, 1921	43.9	104.6	48.1	92.0	101.6	116.2	74.3
June, 1922	38.1	89.5	49.6	85.7	90.0	112.3	68.2
December, 1922	43.4	87.6	52.9	93.0	96.9	110.7	70.7
June, 1923	42.7	87.6	58.1	89.9	110.8	112.4	72.1
December, 1923	45.1	88.2	66.9	102.2	111.6	112.0	74.7
June, 1924	39.3	85.5	72.4	91.7	102.3	110.7	71.5
December, 1924	46.4	84.4	75.3	94.8	100.5	117.6	76.1
June, 1925	51.3	83.8	76.0	87.0	98.9	117.6	77.6
December, 1925	62.0	83.6	77.1	100.5	97.9	117.6	82.6
June, 1926	56.6	82.5	77.1	98.3	93.7	120.6	80.6
December, 1926	61.2	80.3	77.3	98.5	92.3	121.5	82.3
June, 1927	53.8	79.2	75.3	89.4	88.6	120.8	78.0
December, 1927	55.9	77.4	72.1	90.5	87.7	121.2	78.3
June, 1928	51.3	76.5	67.1	81.5	85.4	121.4	75.3
Portland, Me.							
December, 1915	[1] 2.0	2.1	0.2	0.4	6.2	[1] 0.4	[1] 0.4
December, 1916	18.6	9.7	.6	11.4	20.9	13.8	13.8
December, 1917	49.8	32.8	2.4	28.9	43.5	38.0	38.0
December, 1918	86.8	85.8	2.5	67.7	110.8	65.6	72.2
June, 1919	80.6	103.8	5.7	58.4	126.4	72.1	74.3
December, 1919	91.9	148.5	10.7	69.8	163.7	83.2	91.6
June, 1920	114.5	165.9	14.5	83.9	190.3	89.4	107.6
December, 1920	78.7	147.8	20.0	113.5	191.2	94.3	93.1
May, 1921	46.7	116.3	23.1	96.8	152.2	94.1	72.1
December, 1921	54.8	88.1	26.6	99.5	123.6	91.2	69.6
June, 1922	39.9	76.7	24.8	96.1	108.1	88.2	59.7
December, 1922	49.1	74.8	30.7	94.7	114.2	88.0	64.1
June, 1923	45.3	77.3	27.3	94.9	129.7	88.0	63.3
December, 1923	52.3	76.7	31.7	100.0	130.2	89.3	66.9
June, 1924	44.1	75.4	27.4	96.2	126.7	87.9	62.4
December, 1924	52.4	75.0	28.8	99.6	126.0	87.2	66.0
June, 1925	52.2	75.0	25.5	95.8	126.0	87.8	65.3
December, 1925	64.5	74.0	24.4	100.3	126.9	87.6	70.3
June, 1926	58.7	71.7	23.7	100.5	121.7	88.4	67.3
December, 1926	63.3	70.3	23.8	102.9	120.8	88.6	69.2
June, 1927	59.4	67.6	23.6	98.6	118.8	88.6	66.8
December, 1927	60.0	66.8	23.0	102.2	118.4	89.0	67.0
June, 1928	54.2	66.5	21.5	98.4	112.5	88.8	63.8
Portland, Oreg.							
December, 1915	[1] 3.8	3.0	[1] 10.9	[1] 1.0	2.9	[1] 3.1	[1] 3.1
December, 1916	9.8	15.8	[1] 19.6	3.4	18.0	6.1	6.1
December, 1917	42.2	44.4	[1] 22.2	20.2	54.5	31.2	31.2
December, 1918	70.6	96.6	12.3	30.9	109.0	57.9	64.2
June, 1919	67.1	115.5	20.1	31.3	122.1	62.3	69.2
December, 1919	81.6	142.1	27.7	42.3	145.1	71.6	83.7
June, 1920	107.1	158.6	33.2	46.9	183.9	79.7	100.4
December, 1920	60.9	122.1	36.9	65.9	179.9	81.1	80.3
May, 1921	26.0	91.2	42.9	67.1	148.0	81.1	62.2
December, 1921	33.1	65.3	43.3	59.4	121.9	80.0	58.3
June, 1922	26.5	53.2	43.3	50.3	101.9	78.5	52.1
December, 1922	34.3	54.9	43.6	65.7	102.9	79.4	56.1
June, 1923	29.5	61.3	42.5	61.3	109.8	75.8	54.6
December, 1923	35.1	61.8	42.7	67.1	109.0	79.6	57.8
June, 1924	28.5	61.1	43.3	55.5	102.2	73.0	52.8
December, 1924	36.1	59.2	42.9	62.4	102.2	74.4	55.8
June, 1925	40.6	57.6	40.9	52.2	98.6	73.0	55.8
December, 1925	43.2	57.0	40.1	60.0	100.6	73.0	56.9
June, 1926	38.6	56.5	37.9	50.9	95.2	74.2	54.6
December, 1926	40.6	54.0	33.5	61.9	90.7	76.6	55.1
June, 1927	39.2	53.2	30.3	56.9	87.8	76.4	53.7
December, 1927	37.5	51.1	26.9	65.7	86.1	77.1	52.8
June, 1928	36.6	50.8	20.9	51.6	80.5	76.4	50.5

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

San Francisco and Oakland, Calif.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	[1] 4.3	2.5	[1] 0.7	[1] 0.1	6.0	[1] 1.7	[1] 1.7
December, 1916	9.6	14.5	[1] 2.5	4.6	21.7	8.3	8.3
December, 1917	35.9	43.6	[1] 4.0	14.4	48.2	28.6	28.6
December, 1918	66.2	109.0	[1] 3.9	30.1	103.4	50.5	57.8
June, 1919	63.3	134.6	[1] 3.5	28.9	116.6	61.0	65.6
December, 1919	74.2	170.4	4.7	41.3	143.8	74.7	87.8
June, 1920	93.9	191.0	9.4	47.2	180.1	79.6	96.0
December, 1920	64.9	175.9	15.0	66.3	175.6	84.8	85.1
May, 1921	33.3	140.9	21.7	63.3	143.9	84.4	66.7
December, 1921	40.4	106.3	25.8	65.3	113.9	86.8	63.6
June, 1922	31.1	90.7	29.4	59.5	104.4	83.7	56.8
December, 1922	38.8	85.4	30.0	52.5	105.4	84.2	58.8
June, 1923	34.2	92.1	33.4	42.6	116.7	79.4	57.6
December, 1923	42.3	94.4	36.0	48.8	116.9	81.2	62.1
June, 1924	35.0	91.5	38.0	49.9	113.4	73.2	57.3
December, 1924	42.1	90.5	39.4	53.5	114.7	72.7	60.1
June, 1925	47.6	90.5	40.1	54.3	115.1	72.9	62.2
December, 1925	53.3	89.7	40.0	50.8	115.7	74.6	64.7
June, 1926	44.3	88.4	39.6	48.5	105.6	75.3	60.7
December, 1926	48.3	85.6	39.5	51.0	104.6	75.3	61.7
June, 1927	45.4	83.7	38.7	47.1	103.8	77.8	60.5
December, 1927	46.1	82.4	37.3	48.6	103.4	79.2	60.7
June, 1928	41.5	82.9	35.7	45.9	102.0	79.6	58.8
Savannah, Ga.							
December, 1915	[1] 0.3	0.8	[1] 1.4	[1] 1.3	1.8	[1] 0.2	[1] 0.2
December, 1916	17.6	24.1	[1] 3.0	[1] 1.7	12.8	14.6	14.6
December, 1917	50.8	56.6	[1] 4.3	21.1	50.7	42.5	42.5
December, 1918	76.2	133.6	5.9	37.5	128.6	67.3	75.0
June, 1919	74.2	146.3	10.2	35.5	136.5	71.2	79.8
December, 1919	80.9	195.9	22.0	52.2	182.1	82.0	98.7
June, 1920	91.7	212.1	33.5	65.3	207.2	83.8	109.4
December, 1920	63.5	171.5	58.6	94.4	206.6	91.5	98.7
May, 1921	28.7	133.2	61.9	74.2	175.9	93.0	77.6
December, 1921	33.7	84.2	60.9	66.1	133.7	87.4	66.2
June, 1922	22.7	71.7	57.8	55.2	120.1	81.1	56.8
December, 1922	27.6	76.2	52.7	68.3	123.8	79.5	59.2
June, 1923	22.6	81.3	49.5	61.9	135.9	77.4	57.9
December, 1923	25.0	80.9	47.5	64.1	133.4	76.7	58.2
June, 1924	17.5	79.1	45.3	59.7	130.6	77.5	54.8
December, 1924	25.1	75.8	41.0	62.2	128.7	77.5	56.3
June, 1925	31.5	75.1	39.7	59.1	128.2	77.5	57.9
December, 1925	44.9	73.7	38.6	62.9	128.9	79.1	62.9
June, 1926	39.1	73.7	38.0	61.9	126.6	79.5	60.6
December, 1926	39.7	72.0	38.1	68.4	123.9	79.0	60.5
June, 1927	35.4	69.8	37.7	58.3	121.7	80.6	58.3
December, 1927	35.3	68.6	37.1	59.9	121.9	80.8	58.1
June, 1928	31.1	68.8	35.9	56.9	120.8	81.9	56.6
Seattle, Wash.							
December, 1915	[1] 2.8	1.2	[1] 2.4	[1] 0.2	8.5	[1] 1.0	[1] 1.0
December, 1916	8.5	11.3	[1] 5.4	2.9	27.4	7.4	7.4
December, 1917	38.7	36.4	[1] .6	23.9	52.3	31.1	31.1
December, 1918	72.5	88.0	44.3	51.8	141.5	58.5	69.9
June, 1919	69.3	110.2	51.5	51.8	154.4	71.4	76.9
December, 1919	80.9	154.5	71.5	63.8	201.0	86.8	97.7
June, 1920	102.3	173.9	74.8	65.8	221.2	90.4	110.5
December, 1920	54.1	160.5	76.7	78.7	216.4	95.5	94.1
May, 1921	27.1	128.7	74.8	78.7	177.2	105.5	80.2
December, 1921	30.5	88.7	69.2	69.0	149.9	102.6	71.5
June, 1922	30.0	78.0	64.7	64.0	137.3	97.6	67.0
December, 1922	33.9	74.2	63.1	59.6	136.1	96.4	66.7
June, 1923	31.0	76.7	62.3	58.0	143.9	96.6	66.4
December, 1923	35.8	77.6	62.9	59.1	144.2	96.6	68.5
June, 1924	33.1	76.2	64.0	56.8	140.7	94.6	66.7
December, 1924	35.8	74.4	63.7	59.6	141.1	96.4	67.8
June, 1925	43.7	74.6	64.7	57.8	141.6	96.4	70.5
December, 1925	47.3	74.8	63.7	58.1	142.1	97.0	71.7
June, 1926	42.3	74.8	62.6	49.4	139.4	97.0	69.4
December, 1926	41.6	73.1	60.3	61.2	137.5	97.6	69.1
June, 1927	43.0	71.9	59.0	59.3	136.8	98.4	69.4
December, 1927	37.9	69.5	56.9	59.8	134.7	98.2	66.9
June, 1928	36.9	68.8	55.5	57.1	133.5	97.4	65.8

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1928—Continued

Washington, D. C.

Date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1915	0.6	3.7	[1] 1.5	[2]	6.3	0.4	1.0
December, 1916	15.7	23.2	[1] 3.7	7.3	30.5	15.3	14.6
December, 1917	61.1	60.1	[1] 3.4	24.9	72.1	44.3	47.3
December, 1918	90.9	112.6	[1] 1.5	40.9	127.4	55.9	73.8
April, 1919	84.6	109.5	[1] 1.4	41.8	126.0	57.4	71.2
November, 1919	93.3	165.9	5.4	42.8	159.3	62.7	87.6
June, 1920	108.4	184.0	15.6	53.7	196.4	68.2	101.3
December, 1920	79.0	151.1	24.7	68.0	194.0	73.9	87.8
May, 1921	47.4	115.9	28.8	57.1	149.0	72.0	67.1
December, 1921	51.1	87.1	30.4	49.9	122.4	75.8	63.0
June, 1922	44.3	77.5	31.4	44.5	108.1	73.7	57.6
December, 1922	49.2	74.8	32.6	55.1	112.6	72.0	59.5
June, 1923	48.8	78.9	33.9	51.2	129.0	72.5	60.9
December, 1923	52.3	81.2	34.3	47.0	128.8	74.9	63.2
June, 1924	43.7	78.9	35.7	42.9	124.5	75.0	59.2
December, 1924	53.6	75.8	36.7	44.9	125.2	76.5	63.1
June, 1925	57.2	75.4	37.7	39.8	119.8	76.5	64.0
December, 1925	65.6	73.5	40.3	48.7	115.0	75.4	67.3
June, 1926	63.3	73.3	38.6	41.7	112.6	75.0	65.5
December, 1926	66.3	70.9	37.4	45.7	107.5	75.0	66.0
June, 1927	55.0	69.2	36.4	39.3	104.4	73.6	60.5
December, 1927	57.9	67.0	33.8	40.3	103.2	73.8	60.8
June, 1928	55.5	67.0	32.7	38.8	102.2	73.6	59.7

[1] Decrease. [2] No change.

Table 4 shows the changes in the cost of living from December, 1917, to June, 1928, for 13 cities. The table is constructed in the same manner as the preceding one and differs from it only in the base period and in the length of time covered.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1928

Atlanta, Ga.

Date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1918	19.0	29.1	14.0	17.0	24.9	14.8	19.7
June, 1919	18.0	40.7	14.5	17.9	30.1	21.5	23.3
December, 1919	27.9	66.9	32.6	30.8	49.9	31.7	37.9
June, 1920	34.0	80.5	40.4	61.0	65.0	34.6	46.7
December, 1920	12.8	56.5	73.1	66.8	58.4	39.7	38.5
May, 1921	[1] 8.9	35.2	78.8	56.1	38.0	40.5	25.2
December, 1921	[1] 7.2	8.3	75.4	43.7	23.0	39.7	18.7
June, 1922	[1] 10.5	.4	68.1	39.1	15.2	34.5	13.7
December, 1922	[1] 8.9	2.8	62.7	57.6	17.4	34.1	15.1
June, 1923	[1] 10.3	5.9	61.4	42.7	23.9	32.8	14.2
December, 1923	[1] 6.3	6.9	62.2	39.3	23.5	33.3	16.0
June, 1924	[1] 10.2	5.7	60.1	32.0	20.4	33.8	13.6
December, 1924	[1] 5.5	4.9	56.9	33.1	20.4	33.7	14.9
June, 1925	[1] 1.2	4.5	55.5	26.2	19.9	34.9	16.2
December, 1925	6.5	4.3	49.3	34.7	18.8	35.6	19.0
June, 1926	4.5	3.9	44.4	36.6	17.4	34.0	17.3
December, 1926	4.3	2.9	42.1	46.0	15.5	33.9	17.4
June, 1927	4.1	2.1	41.5	31.7	14.6	33.9	16.2
December, 1927	1.3	.2	39.5	38.0	15.9	31.5	14.3
June, 1928	[1] 1.0	.2	38.9	31.8	15.2	35.6	13.9

[1] Decrease.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1928—Continued

Birmingham, Ala.

Date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1918	17.7	23.9	8.1	22.8	19.4	13.8	17.0
June, 1919	18.3	29.8	12.8	31.9	20.2	16.3	19.8
December, 1919	26.5	57.6	34.9	39.8	45.1	26.8	34.3
June, 1920	36.4	66.4	40.3	55.3	55.6	28.7	41.9
December, 1920	11.9	45.1	68.5	74.2	48.1	30.4	33.3
May, 1921	[1] 9.1	24.8	77.4	54.3	32.0	33.8	22.1
December, 1921	[1] 8.5	[1] .4	70.9	44.1	12.0	35.5	16.2
June, 1922	[1] 13.1	[1] 6.1	67.0	25.0	3.3	30.4	10.7
December, 1922	[1] 9.9	[1] 1.7	62.3	49.9	8.9	29.6	13.2
June, 1923	[1] 9.9	1.8	63.1	40.7	17.8	28.5	13.6
December, 1923	[1] 6.6	3.8	67.9	50.2	19.7	27.2	16.0
June, 1924	[1] 12.6	3.2	68.6	40.5	14.3	27.2	13.1
December, 1924	[1] 3.1	1.6	68.6	45.7	14.9	27.3	16.8
June, 1925	[1] .9	1.5	68.3	33.8	15.5	27.2	16.9
December, 1925	4.5	[1] .3	68.0	41.4	15.5	27.8	19.2
June, 1926	1.5	[1] .9	66.5	41.0	13.5	26.9	17.5
December, 1926	1.8	[1] 1.9	65.8	51.3	12.4	26.9	17.8
June, 1927	[1] 3.1	[1] 3.1	64.5	39.6	11.2	26.4	14.8
December, 1927	[1] 1.3	[1] 4.1	61.7	45.9	14.1	28.5	15.7
June, 1928	[1] 4.7	[1] 4.3	59.4	37.1	13.9	28.2	13.7

Cincinnati, Ohio

December, 1918	15.3	33.8	0.2	10.0	25.7	20.4	17.3
June, 1919	18.1	48.3	.8	5.6	30.5	21.8	21.1
December, 1919	22.9	84.2	12.8	11.0	51.1	40.3	35.2
June, 1920	38.7	96.7	13.6	26.9	75.5	47.6	47.1
December, 1920	10.3	73.5	25.0	34.1	66.7	53.4	34.7
May, 1921	[1] 7.4	49.0	27.6	15.7	39.7	52.3	21.7
December, 1921	[1] 8.3	13.9	28.5	42.4	22.3	47.3	15.3
June, 1922	[1] 8.9	4.9	31.0	35.2	15.8	44.0	12.7
December, 1922	[1] 10.4	5.5	35.2	61.0	17.2	42.7	13.8
June, 1923	[1] 9.3	8.8	40.7	51.9	24.3	42.8	15.5
December, 1923	[1] 6.7	9.2	45.6	53.0	26.2	43.3	17.7
June, 1924	[1] 10.2	6.4	49.3	39.3	23.2	46.9	16.3
December, 1924	[1] 8.3	1.5	50.1	44.5	23.2	52.3	17.6
June, 1925	[1] .9	1.2	51.2	61.1	23.4	55.0	22.1
December, 1925	3.9	[1] 1.1	51.8	70.4	21.3	49.9	23.0
June, 1926	2.7	[1] 1.2	54.8	62.2	17.7	50.5	22.6
December, 1926	3.1	[1] 1.7	55.9	83.6	16.9	50.5	23.8
June, 1927	3.9	[1] 2.3	56.8	66.7	16.1	50.0	23.3
December, 1927	[1] 1.0	[1] 3.9	57.9	66.9	16.6	50.0	21.3
June, 1928	[1] .5	[1] 3.9	57.1	61.1	15.4	49.7	21.0

Denver, Colo.

December, 1918	20.0	40.1	12.8	8.1	22.6	14.8	20.7
June, 1919	20.7	53.2	21.8	8.4	31.3	17.7	25.3
December, 1919	26.0	82.1	33.5	19.6	46.3	32.3	38.2
June, 1920	41.5	96.8	51.9	22.3	60.2	35.4	50.3
December, 1920	7.9	78.3	69.8	47.1	58.9	38.8	38.7
May, 1921	[1] 13.1	53.9	76.9	37.5	42.5	42.8	26.9
December, 1921	[1] 8.8	27.7	82.6	39.7	27.9	43.1	24.5
June, 1922	[1] 14.2	15.3	84.8	32.8	20.4	38.1	18.8
December, 1922	[1] 9.0	16.6	86.9	40.7	21.2	37.6	21.6
June, 1923	[1] 11.5	16.9	85.4	30.4	26.1	37.1	19.9
December, 1923	[1] 8.7	17.9	88.9	37.2	27.0	36.8	22.1
June, 1924	[1] 13.5	16.1	84.4	19.7	23.8	35.1	17.8
December, 1924	[1] 7.8	15.1	84.0	25.4	24.2	35.6	20.2
June, 1925	[1] 5.3	14.5	82.5	27.0	24.8	35.6	21.1
December, 1925	[1] 1.3	13.1	78.5	37.4	25.2	35.6	22.5
June, 1926	[1] 3.8	12.4	71.9	25.3	24.2	35.1	19.7
December, 1926	[1] 3.0	11.8	65.5	38.1	23.5	36.6	20.4
June, 1927	[1] 2.8	10.1	61.2	20.8	22.9	36.1	18.4
December, 1927	[1] 6.9	8.9	58.3	32.9	21.2	34.2	16.6
June, 1928	[1] 8.6	8.4	55.8	26.9	20.5	33.4	14.9

[1] Decrease.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1928—Continued

Indianapolis, Ind.

Date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1918	17.8	32.4	1.6	19.8	18.9	21.9	19.1
June, 1919	16.4	40.1	2.6	16.7	24.8	26.8	21.1
December, 1919	28.2	73.8	11.6	27.3	48.4	38.2	36.5
June, 1920	49.0	87.9	18.9	45.6	67.5	40.5	50.2
December, 1920	11.0	72.3	32.9	60.3	63.0	47.5	37.6
May, 1921	[1] 10.1	45.8	37.4	49.4	35.3	47.4	23.9
December, 1921	[1] 8.4	16.2	43.8	42.5	22.5	46.2	19.3
June, 1922	[1] 9.9	7.9	41.3	44.9	13.7	45.4	16.4
December, 1922	[1] 11.1	8.6	44.1	73.4	16.7	46.7	18.8
June, 1923	[1] 8.0	11.6	44.6	54.9	23.2	46.1	19.4
December, 1923	[1] 6.5	13.4	47.1	41.5	24.0	49.2	20.6
June, 1924	[1] 10.0	11.9	46.5	38.2	21.4	51.5	19.3
December, 1924	[1] 4.9	10.4	46.7	41.5	21.5	53.3	21.4
June, 1925	[1] 2.3	9.8	44.1	33.9	20.6	53.8	21.5
December, 1925	4.4	7.5	41.7	44.9	21.8	54.1	24.2
June, 1926	2.6	7.4	38.3	33.9	20.6	51.6	21.9
December, 1926	2.9	5.4	36.5	47.8	19.9	51.8	22.3
June, 1927	3.5	5.9	34.6	34.6	18.0	52.3	21.4
December, 1927	[1] 1.5	4.3	33.4	34.2	17.5	52.6	19.2
June, 1928	[1] 1.8	4.3	31.3	29.2	13.7	52.3	18.2

Kansas City, Mo.

December, 1918	17.3	40.7	5.4	18.0	31.1	15.6	19.6
June, 1919	15.1	44.8	6.7	9.6	37.9	20.8	20.6
December, 1919	24.5	89.9	26.0	27.5	61.8	31.5	38.2
June, 1920	44.9	104.5	29.4	35.2	73.0	37.1	51.0
December, 1920	10.2	76.3	63.9	55.1	68.7	40.3	39.5
May, 1921	[1] 8.3	52.3	65.0	43.3	50.0	40.4	27.3
December, 1921	[1] 6.6	24.1	69.7	42.6	26.2	37.6	22.5
June, 1922	[1] 13.5	15.9	59.4	36.3	11.6	32.3	15.0
December, 1922	[1] 12.0	14.6	61.4	40.2	12.1	33.3	16.2
June, 1923	[1] 12.5	14.5	53.7	36.1	22.5	33.8	15.3
December, 1923	[1] 10.2	15.2	56.8	36.7	22.6	36.2	17.2
June, 1924	[1] 12.7	13.3	49.5	34.5	16.8	35.3	14.3
December, 1924	[1] 7.7	12.0	46.2	32.9	16.1	34.3	15.3
June, 1925	[1] 3.9	11.4	40.6	32.8	15.6	36.4	16.3
December, 1925	2.0	9.2	39.5	32.3	14.1	36.3	18.0
June, 1926	.5	8.7	35.9	29.4	12.8	36.3	16.6
December, 1926	[1] 1.7	6.3	34.1	33.5	10.8	36.3	15.2
June, 1927	[1] 2.2	5.4	29.1	29.8	8.6	36.6	14.0
December, 1927	[1] 6.8	3.7	28.3	29.0	7.7	36.5	11.9
June, 1928	[1] 5.4	2.7	24.8	28.7	6.8	35.0	11.2

Memphis, Tenn.

December, 1918	20.3	27.7	[2]	26.8	25.4	16.1	18.3
June, 1919	22.7	38.3	8.2	23.4	30.7	20.9	23.3
December, 1919	28.4	66.2	23.1	34.1	53.2	28.3	35.2
June, 1920	38.8	77.5	35.9	49.7	67.1	38.8	46.4
December, 1920	7.0	59.0	66.2	105.4	53.9	43.2	39.3
May, 1921	[1] 14.2	36.1	79.7	64.5	29.9	42.9	26.7
December, 1921	[1] 11.2	15.3	77.3	67.1	14.7	42.3	23.2
June, 1922	[1] 15.1	7.3	74.8	56.3	6.8	37.8	18.2
December, 1922	[1] 14.9	6.7	72.5	68.5	12.2	37.4	18.6
June, 1923	[1] 13.9	9.8	72.3	62.8	23.2	38.1	19.9
December, 1923	[1] 11.2	11.0	72.5	65.0	23.4	37.3	21.0
June, 1924	[1] 17.1	9.5	72.4	66.2	18.6	36.3	18.2
December, 1924	[1] 9.2	6.4	68.6	66.2	20.1	37.4	20.4
June, 1925	[1] 7.1	5.9	66.4	55.7	20.1	38.5	20.5
December, 1925	[1] 2.0	4.7	60.4	71.4	20.1	37.8	22.0
June, 1926	[1] 4.1	4.0	57.0	63.3	18.2	36.7	19.9
December, 1926	[1] 5.7	3.9	53.9	80.1	17.1	37.7	19.9
June, 1927	[1] 7.2	1.9	50.2	79.4	16.0	36.6	18.1
December, 1927	[1] 8.0	1.6	47.3	76.0	16.0	36.6	17.3
June, 1928	[1] 8.1	1.5	46.3	60.0	16.0	36.9	16.4

[1] Decrease. [2] No change.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1928—Continued

Minneapolis, Minn.

Date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1918	17.7	33.5	[1] 0.1	14.7	18.1	12.3	15.8
June, 1919	21.4	40.1	[1] 2.0	13.4	23.6	15.9	18.8
December, 1919	34.1	67.0	8.0	22.4	45.6	25.4	32.7
June, 1920	50.0	76.7	10.7	36.9	65.5	31.3	43.4
December, 1920	13.0	63.6	36.8	60.3	65.8	37.6	35.7
May, 1921	[1] 7.9	41.0	39.0	52.8	43.3	37.9	23.7
December, 1921	[1] 4.9	14.3	46.7	50.2	27.9	37.4	20.7
June, 1922	[1] 6.0	7.9	44.6	43.7	21.4	32.6	17.3
December, 1922	[1] 5.3	6.5	46.8	47.0	22.5	32.6	18.0
June, 1923	[1] 6.4	9.2	42.5	44.9	29.7	32.8	17.4
December, 1923	[1] 4.7	9.3	47.4	45.6	28.2	32.0	18.8
June, 1924	[1] 7.9	7.4	44.7	42.2	22.8	31.3	16.2
December, 1924	[1] 4.3	5.6	44.9	43.2	23.3	31.2	17.3
June, 1925	[1] .8	4.9	40.7	40.9	23.2	31.1	17.6
December, 1925	6.9	4.4	41.0	42.6	22.1	30.6	20.3
June, 1926	5.8	3.4	36.8	45.9	19.9	32.8	19.6
December, 1926	2.3	2.5	36.1	46.6	17.0	33.5	18.2
June, 1927	4.1	1.1	30.2	44.3	15.1	32.6	17.2
December, 1927	[2]	[1] 1.4	29.9	45.6	14.9	33.0	15.4
June, 1928	1.6	[1] 1.1	27.2	45.2	12.3	34.6	15.8

New Orleans, La.

December, 1918	16.6	36.8	[2]	19.7	23.8	15.9	17.9
June, 1919	17.4	48.8	0.1	20.8	30.0	17.5	20.7
December, 1919	21.1	83.2	10.8	24.7	57.7	35.1	33.9
June, 1920	28.6	94.9	12.9	36.3	75.9	42.8	41.9
December, 1920	10.7	69.4	39.7	41.5	63.9	57.1	36.7
May, 1921	[1] 10.7	45.0	46.7	29.2	47.7	58.2	23.8
December, 1921	[1] 9.3	24.9	57.9	40.4	28.5	60.2	22.7
June, 1922	[1] 12.8	15.6	58.5	33.4	17.9	58.6	18.9
December, 1922	[1] 10.5	16.2	54.7	38.5	26.2	51.9	18.6
June, 1923	[1] 13.2	17.8	55.5	32.9	34.8	50.1	17.7
December, 1923	[1] 8.7	19.5	57.4	37.1	33.6	50.3	20.2
June, 1924	[1] 14.6	18.6	57.1	32.9	29.2	48.7	16.8
December, 1924	[1] 5.7	17.2	57.2	36.2	30.0	48.7	20.6
June, 1925	[1] 5.7	17.0	57.0	33.7	27.0	48.3	20.2
December, 1925	.9	15.9	56.8	34.2	27.5	47.9	22.7
June, 1926	[1] 5.2	15.7	57.0	39.6	26.6	46.7	20.1
December, 1926	[1] 1.6	15.6	56.2	43.8	25.0	47.4	21.7
June, 1927	[1] 3.9	13.4	56.0	38.5	21.8	48.6	20.3
December, 1927	[1] 4.9	13.4	56.2	38.5	21.8	48.5	19.9
June, 1928	[1] 6.8	13.1	55.9	34.5	17.9	46.1	18.2

Pittsburgh, Pa.

December, 1918	18.8	35.9	7.6	9.2	26.3	16.3	19.8
June, 1919	16.2	45.3	13.5	9.4	34.1	16.7	21.8
December, 1919	25.1	82.8	15.5	9.8	63.1	28.3	36.2
June, 1920	36.5	91.3	34.9	31.7	77.4	41.2	49.1
December, 1920	14.3	75.4	35.0	64.4	78.1	46.3	39.3
May, 1921	[1] 8.8	50.7	55.5	59.8	58.2	48.6	27.7
December, 1921	[1] 5.6	23.6	55.3	66.2	31.6	48.0	22.8
June, 1922	[1] 12.2	17.3	56.7	66.0	20.1	43.4	17.8
December, 1922	[1] 5.4	13.1	56.7	72.8	25.1	42.8	20.1
June, 1923	[1] 5.4	14.8	60.4	68.4	29.4	44.1	21.3
December, 1923	[1] 2.1	14.9	60.7	76.9	29.0	43.1	22.9
June, 1924	[1] 7.5	13.7	71.8	74.8	29.0	45.3	22.4
December, 1924	[1] 2.4	11.2	72.1	92.2	29.8	46.6	24.9
June, 1925	[1] .2	11.1	75.2	91.2	27.7	46.7	26.0
December, 1925	6.2	10.5	75.2	89.9	28.0	46.8	28.5
June, 1926	2.6	7.8	75.4	88.0	25.3	46.1	26.2
December, 1926	5.6	5.5	75.0	91.9	24.3	46.4	27.2
June, 1927	2.2	5.2	74.7	88.8	22.6	46.3	25.4
December, 1927	1.4	3.8	74.4	88.0	21.9	46.2	24.8
June, 1928	[1] 3.8	4.2	72.8	85.6	15.9	46.9	22.3

[1] Decrease. [2] No change.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1928—Continued

Richmond, Va.

Date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1918	20.5	33.8	1.0	11.8	26.3	9.0	17.9
June, 1919	20.6	42.3	3.6	11.4	28.6	13.5	20.6
December, 1919	23.1	78.6	9.8	18.7	55.9	24.0	32.0
June, 1920	36.1	93.6	12.5	36.1	75.4	32.4	43.8
December, 1920	11.9	69.0	25.9	62.2	70.0	36.0	33.3
May, 1921	[1] 7.4	43.8	29.4	47.1	48.8	38.7	20.2
December, 1921	[1] 2.9	21.2	34.1	46.8	33.0	38.4	18.3
June, 1922	[1] 7.8	12.9	34.5	33.4	27.6	34.7	13.2
December, 1922	[1] 6.3	10.6	35.3	54.2	29.4	33.5	14.4
June, 1923	[1] 7.2	12.5	35.7	52.7	40.0	33.9	14.9
December, 1923	[1] 4.8	12.9	39.4	61.2	40.5	35.4	17.1
June, 1924	[1] 11.3	11.9	39.5	49.1	37.8	35.8	13.5
December, 1924	[1] 3.3	8.9	41.3	47.9	38.5	35.7	16.5
June, 1925	[1] 2.4	8.6	41.4	44.2	38.2	36.0	16.7
December, 1925	4.8	8.4	40.4	53.6	39.2	39.1	20.8
June, 1926	1.6	8.1	39.6	51.0	38.1	40.8	19.7
December, 1926	.9	7.0	36.0	61.4	36.7	40.8	19.3
June, 1927	[1] 1.2	5.8	34.0	51.9	35.6	40.9	17.4
December, 1927	[1] 2.9	5.3	31.1	54.2	35.3	40.9	16.4
June, 1928	[1] 3.8	5.0	30.6	43.9	33.8	41.0	15.3

St. Louis, Mo.

December, 1918	18.0	32.4	2.7	4.8	21.8	14.5	16.7
June, 1919	16.1	39.3	3.8	3.7	32.5	15.7	17.9
December, 1919	26.2	78.1	16.8	8.2	52.9	30.3	34.2
June, 1920	46.2	89.7	29.8	19.6	73.1	37.6	48.9
December, 1920	8.8	70.0	42.4	42.6	70.2	43.2	35.4
May, 1921	[1] 10.1	43.8	52.5	30.9	43.5	42.1	23.1
December, 1921	[1] 11.6	17.2	63.8	33.4	19.2	40.6	18.5
June, 1922	[1] 12.1	7.9	65.7	32.3	12.8	33.2	15.1
December, 1922	[1] 9.5	6.3	68.0	48.9	14.9	33.4	17.0
June, 1923	[1] 11.5	9.0	74.6	30.8	29.8	33.4	17.7
December, 1923	[1] 7.5	9.6	79.5	32.1	30.5	35.8	20.6
June, 1924	[1] 11.4	8.6	83.4	21.6	26.2	35.7	18.8
December, 1924	[1] 6.5	7.9	83.4	24.6	27.4	35.8	20.7
June, 1925	[1] 2.5	7.4	85.2	19.5	28.0	36.6	22.4
December, 1925	3.4	6.9	85.4	26.9	27.9	37.0	25.0
June, 1926	2.8	6.8	84.7	18.3	27.1	36.6	24.1
December, 1926	2.0	7.0	83.2	38.9	22.7	36.6	24.5
June, 1927	1.2	4.4	81.0	34.0	22.3	36.5	23.2
December, 1927	[1] 2.3	3.4	78.3	34.3	23.3	36.9	21.4
June, 1928	[1] 3.5	3.1	76.3	18.9	21.6	37.2	19.9

Scranton, Pa.

December, 1918	21.3	34.4	0.5	24.7	27.0	21.4	21.9
June, 1919	18.1	49.6	6.2	25.7	35.6	24.9	25.0
December, 1919	26.9	82.1	2.4	31.5	48.9	34.7	37.1
June, 1920	41.4	97.7	17.2	43.5	62.8	47.9	51.5
December, 1920	17.8	76.5	18.5	67.3	62.0	50.4	39.1
May, 1921	[1] 4.0	54.3	41.5	62.8	48.6	54.6	28.2
December, 1921	4.1	29.1	44.6	67.1	30.7	52.4	26.3
June, 1922	[1] 6.7	24.2	52.8	68.0	24.2	49.9	20.9
December, 1922	[1] 2.1	20.7	53.6	68.6	28.5	49.3	22.4
June, 1923	[1] 5.1	21.7	59.0	65.2	34.7	51.4	22.4
December, 1923	.2	23.2	60.8	75.3	34.9	51.7	25.8
June, 1924	[1] 8.7	22.2	67.6	68.9	31.6	53.7	22.4
December, 1924	[1] 1.6	21.1	68.6	75.7	34.6	53.7	25.8
June, 1925	1.4	20.3	71.0	70.3	33.9	54.8	27.0
December, 1925	9.6	20.2	70.5	99.8	33.9	55.4	32.0
June, 1926	4.7	19.5	71.4	77.8	34.4	55.9	29.0
December, 1926	6.7	18.3	72.4	78.5	33.7	55.9	29.8
June, 1927	4.2	17.2	73.1	71.4	32.4	55.7	28.2
December, 1927	5.0	16.3	73.4	75.3	32.1	55.9	28.5
June, 1928	2.4	16.2	71.7	69.0	30.1	56.2	26.9

[1] Decrease.

The following table shows the increase in each item of expenditure in the United States from 1913 to June, 1928. These figures are a summarization of the figures for the 32 cities, the results of which appear in the preceding tables, but computed on a 1913 base.

TABLE 5.—CHANGES IN COST OF LIVING IN THE UNITED STATES, 1913, TO JUNE, 1928

Date	Per cent of increase over 1913 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
December, 1914	5.0	1.0	(1)	1.0	4.0	3.0	3.0
December, 1915	5.0	4.7	1.5	1.0	10.6	7.4	5.1
December, 1916	26.0	20.0	2.3	8.4	27.8	13.3	18.3
December, 1917	57.0	49.1	.1	24.1	50.6	40.5	42.4
December, 1918	87.0	105.3	9.2	47.9	113.6	65.8	74.4
June, 1919	84.0	114.5	14.2	45.6	125.1	73.2	77.3
December, 1919	97.0	168.7	25.3	56.8	163.5	90.2	99.3
June, 1920	119.0	187.5	34.9	71.9	192.7	101.4	116.5
December, 1920	78.0	158.5	51.1	94.9	185.4	108.2	100.4
May, 1921	44.7	122.6	59.0	81.6	147.7	108.8	80.4
September, 1921	53.1	92.1	60.0	80.9	124.7	107.8	77.3
December, 1921	49.9	84.4	61.4	81.1	118.0	106.8	74.3
March, 1922	38.7	75.5	60.9	75.8	106.2	103.3	66.9
June, 1922	40.7	72.3	60.9	74.2	102.9	101.5	66.4
September, 1922	39.7	71.3	61.1	83.6	102.9	101.1	66.3
December, 1922	46.6	71.5	61.9	86.4	108.2	100.5	69.5
March, 1923	41.9	74.4	62.4	86.2	117.6	100.3	68.8
June, 1923	44.3	74.9	63.4	80.6	122.2	100.3	69.7
September, 1923	49.3	76.5	64.4	81.3	122.4	101.1	72.1
December, 1923	50.3	76.3	66.5	84.0	122.4	101.7	73.2
March, 1924	43.7	75.8	67.0	82.2	121.3	101.1	70.4
June, 1924	42.4	74.2	68.0	77.3	116.0	101.1	69.1
September, 1924	46.8	72.3	68.0	79.1	114.9	101.1	70.6
December, 1924	51.5	71.3	68.2	80.5	116.0	101.7	72.5
June, 1925	55.0	70.6	67.4	76.5	114.3	102.7	73.5
December, 1925	65.5	69.4	67.1	86.9	114.3	103.5	77.9
June, 1926	59.7	68.2	65.4	80.7	110.4	103.3	74.8
December, 1926	61.8	66.7	64.2	88.3	107.7	103.9	75.6
June, 1927	58.5	64.9	62.1	80.8	105.2	104.5	73.4
December, 1927	55.9	62.9	60.2	83.2	104.6	105.1	72.0
June, 1928	52.6	62.6	57.6	77.2	101.1	105.5	70.0

[1] No change.

The following table shows the per cent of decrease in the price of electricity on the dates specified as compared with the price in December, 1913. These figures are based on the average prices for household use in 32 cities and are included in the preceding tables under the item "Fuel and light."

TABLE 6.—PER CENT OF DECREASE IN THE PRICE OF ELECTRICITY AT SPECIFIED PERIODS AS COMPARED WITH DECEMBER, 1913

Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913
December, 1914	3.7	December, 1921	4.9	September, 1924	8.6
December, 1915	6.2	March, 1922	4.9	December, 1924	8.6
December, 1916	8.6	June, 1922	6.2	June, 1925	9.9
December, 1917	11.1	September, 1922	6.2	December, 1925	9.9
December, 1918	6.2	December, 1922	7.4	June, 1926	11.1
June, 1919	6.2	March, 1923	7.4	December, 1926	11.1
December, 1919	7.4	June, 1923	7.4	June, 1927	12.3
June, 1920	7.4	September, 1923	8.6	December, 1927	12.3
December, 1920	4.9	December, 1923	8.6	June, 1928	13.6
May, 1921	4.9	March, 1924	8.6		
September, 1921	4.9	June, 1924	8.6		

Cost of Living in the United States and in Foreign Countries [1]

THE trend of cost of living in the United States and in various foreign countries since 1913 is shown by the index numbers in the following tables. Table 1 contains general cost of living index numbers, while Tables 2, 3, 4, and 5 show changes in the cost of food, clothing, fuel and light, and rent, respectively.

Caution should be observed in the use of these figures, since not only are there differences in the base periods and in the number and kind of articles included and the number of markets represented, but also there are radical differences of method in the construction of the index numbers. The number of countries included in the five tables varies according to the information available. Several countries publish an index number for food only, while others omit clothing and in some instances also rent.

[1] Preceding articles on this subject appeared in the Labor Review for December, 1922, July, 1923, January and July, 1924, January and July, 1925, January, 1926, and February, 1927.

TABLE 1.—INDEX NUMBERS OF **COST OF LIVING** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928

Country	United States	Canada	Belgium	Czecho-slovakia	Den-mark	Finland	France	Ger-many	Ireland	Italy
Number of localities	32	60	59	Prague	200	21	Paris	71	200	Milan
Commodities included	Food, clothing, fuel and light, rent, house-furnishings, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, taxes, etc.	Food, clothing, fuel, rent, taxes, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Department of Industry and Commerce	Municipal Administration
Base period	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	1914	1913–14	July, 1914	January-June, 1914
1913	100	100								
1914	[1] 103	[1] 103		[2] 100	[2] 100	[3] 100	100	[4] 100	[2] 100	[3] 100
1915	[1] 105	[1] 107			[2] 116					114
1916	[1] 118	[1] 124			[2] 136					146
1917	[1] 142	[1] 143			[2] 155					197
1918	[1] 174	[1] 162			[2] 182					285
1919	[1] 199	[1] 176			[2] 211		[3] 238			327
1920	[1] 200	[1] 190			[2] 262		[5] 341			442
1921	[1] 174	[1] 161	100		[2] 237	[1] 1172	[5] 307			541
1922	[1] 170	[1] 157	[2] 90		[2] 199	[1] 1157	[5] 302		[2] 185	501
1923	[1] 173	[1] 159	[3] 109	690	[2] 204	1147	[5] 334	[1] 142	[2] 180	494
1924			[2] 125	692		1170				527
June	169	153	123	697	[2] 214	1147	[6] 366	124	[2] 183	518
Dec.	173	156	137	707		1217	[6] 377	135		573
1925			[3] 133	721		1212				611
June	174	155	131	731	[2] 219	1191	[6] 390	138	[2] 188	596
Dec.	178	160	143	703		1197	[6] 421	141		649
1926						1183				654
Jan.			139	707	194	1166		140	188	665
Feb.			140	699		1175		139		661
Mar.		159	137	687		1172	[6] 451	138		647
Apr.			140	685		1163		140	180	642
May			147	692		1159		140		652
June	175	157	155	693		1175	[6] 485	141		650
July			174	718	184	1183		142	182	649
Aug.			182	723		1213		143		652
Sept.		156	179	723		1203	[6] 539	142		647
Oct.			188	726		1197		142	189	672
Nov.			196	734		1193		144		657
Dec.	176	157	199	735		1197	[6] 545	144		657
1927						1207				
Jan.		158	202	741	181	1187		145	182	655
Feb.		157	204	740		1189		145		667
Mar.		157	200	738		1183	[6] 524	145		663
Apr.		155	199	740	178	1173		146	171	651
May		155	197	750		1166		147		612
June	173	155	210	755		1184	[6] 525	148		586
July		155	204	747	176	1203		150	171	548
Aug.		155	201	733		1237		147		543
Sept.		155	204	730		1230	[6] 507	147		537
Oct.		156	207	727	176	1237		150	175	536
Nov.		156	207	729		1251		151		536
Dec.	172	157	207	734		1243	[6] 498	151		531
1928:										
Jan.		157	209	734	176	1216		151	177	532
Feb.		156	206	732		1206		151		533
Mar.		156	203	730		1214	[6] 507	151		531
Apr.		156	204	734	176	1212		151	170	531
May		155		736				151		526
June	170									

[1] December.
[2] July.
[3] January–June.
[4] October, 1913, January, April, and June, 1914.
[5] April–June.
[6] Quarter ending with month.

TABLE 1.—INDEX NUMBERS OF **COST OF LIVING** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928—Continued

Country	Netherlands	Norway	Poland	Sweden	Switzerland	United Kingdom	South Africa	India	Australia	New Zealand
Number of localities	The Hague	30	Warsaw	49	33	630	9	Bombay	30	25
Commodities included	All commodities	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent	Food, clothing, fuel and light, rent, sundries	Food, fuel, light, rent, sundries	Food, clothing, fuel and light, rent	Food, groceries, rent	Food, clothing, fuel and light, rent, sundries
Computing agency	Municipal Administration	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Office of Census and Statistics	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period	1921	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	1914	July, 1914	1911	July, 1914
1913									108	
1914		[7] 100	100	[2] 100	[2] 100	[2] 100	100	[2] 100	111	[2] 100
1915		[7] 117				[2] 125	105		126	107
1916		[7] 146		[1] 139		[2] 148	112		130	116
1917		[7] 190				[2] 180	122		129	129
1918		[7] 253		[2] 219	204	[2] 203	131	154	134	143
1919		[7] 275		[2] 257	222	[2] 208	145	175	148	157
1920		[7] 302		[2] 270	224	[2] 252	179	183	175	178
1921	100	[7] 302		[2] 236	200	[2] 219	162	173	167	177
1922	[1] 83	[7] 255		[2] 190	164	[2] 184	135	164	156	160
1923	[1] 82	[7] 239		[2] 174	164	[2] 169	131	154	168	158
1924				[2] 171	169	[2] 170	133	157	166	160
June	84	251		[2] 171		169	133	153	[6] 166	
Dec.	84	267				181	133	160	[6] 165	
1925					168			155	170	162
June	86	261		[2] 176	168	172	134	154	[6] 170	
Dec.	82	236			167	177	131	155	[6] 172	[6] 164
1926					162				176	163
Jan.			121	174	166	175	131	155		
Feb.			114		164	173	131	154		162
Mar.	80	227	111		163	172	131	155	[6] 175	
Apr.			95	173	162	168	131	153		
May			87		162	167	132	153		163
June	82	221	98		162	168	131	155	[6] 180	
July			102	172	162	170	130	157		
Aug.			104		161	170	130	155		163
Sept.	79	221	109		161	172	130	155	[6] 176	
Oct.			111	171	161	174	131	155		
Nov.			114		161	179	131	154		163
Dec.	80	216	115		161	179	129	156	[6] 174	
1927					160				174	162
Jan.		213	117	171	160	175	130	156		
Feb.		211	117		160	172	130	155		162
Mar.	80	208	116		159	171	131	155	[6] 174	
Apr.		206	118	170	158	165	131	153		
May		205	119		160	164	132	152		162
June	80	204	119		160	163	132	154	[6] 172	
July		206	115	169	160	166	132	156		
Aug.		205	116		160	164	131	157		161
Sept.	80	199	117		161	165	131	154	[6] 175	
Oct.		199	119	172	161	167	132	151		
Nov.		198	122		162	169	132	150		161
Dec.	82	197	121		162	169	132	151	[6] 177	
1928:										
Jan.		197	120	171	161	168	132	154		
Feb.		197	118		161	166	131	148		161
Mar.	83	196	119		160	164	132	145	[6] 175	
Apr.		196	121	171	160	164	133	144		
May		196	121			164		147		
June						165				

[1] December. [2] July. [6] Quarter ending with month. June.

TABLE 2.—INDEX NUMBERS OF **COST OF FOOD** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928

Country	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Ireland	Italy
Number of localities	51	60	59	Prague	200	21	Paris	71	200	Milan
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Department of Industry and Commerce	Municipal Administration
Base period	1913	1913	1921	July, 1914	July, 1914	January–June, 1914	1914	1913–14	July, 1914	January–June, 1914
1913	100	100								
1914	[1] 105	[1] 108		[2] 100	[2] 100	[3] 100	100	[4] 100	[2] 100	[3] 100
1915	[1] 105	[1] 111								116
1916	[1] 126	[1] 138								149
1917	[1] 157	[1] 167								205
1918	[1] 187	[1] 186								320
1919	[1] 197	[1] 201					[3] 260			359
1920	[1] 178	[1] 202					[5] 344			455
1921	[1] 150	[1] 150	100			[1] 1, 230	[5] 323			559
1922	[1] 147	[1] 142	[2] 87		[2] 184	[1] 1, 122	[5] 316		[2] 185	522
1923	[1] 150	[1] 146	[3] 105	769	[2] 188	1, 079	[5] 346	[1] 166	[2] 182	500
1924	146	[1] 144	[3] 124	787		1, 093				528
June	142	134	120	801	[2] 200	1, 040	[6] 377	128	[2] 185	518
Dec	152	144	140	810		1, 160	[6] 389	146		579
1925	157			827		1, 147				622
June	155	142	131	846	[2] 210	1, 101	[6] 412	146	[2] 188	599
Dec	166	157	147	796		1, 138	[6] 437	146		660
1926	161					1, 108				655
Jan	164		142	800	177	1, 090		143	187	681
Feb	162		142	787		1, 106		142		676
Mar	160	156	138	767		1, 100	[6] 473	141		654
Apr	162		142	761		1, 085		142	175	645
May	161		152	774		1, 078		142		664
June	160	151	161	775		1, 090	[6] 507	143		657
July	157		185	808	159	1, 105		145	174	654
Aug	156		193	817		1, 153		146		660
Sept	159	149	186	816		1, 137	[6] 562	145		652
Oct	160		197	823		1, 126		145	178	654
Nov	162		206	837		1, 114		148		630
Dec	162	152	208	840		1, 110	[6] 574	150		631
1927	155					1, 115				
Jan	159	155	208	849	156	1, 092		151	178	625
Feb	156	153	212	848		1, 095		152		642
Mar	154	151	205	844		1, 086	[6] 554	151		635
Apr	154	147	204	853	152	1, 069		150	165	617
May	155	147	201	865		1, 058		151		565
June	159	148	207	878		1, 072	[6] 559	153		541
July	153	149	210	863	153	1, 102		157	166	524
Aug	152	149	204	849		1, 159		150		518
Sept	154	148	207	840		1, 146	[6] 525	151		509
Oct	156	150	210	834	152	1, 156		152	172	509
Nov	157	151	211	836		1, 175		152		510
Dec	156	152	211	844		1, 171	[6] 504	153		513
1928:										
Jan	155	152	210	845	152	1, 126		152	175	514
Feb	152	150	207	842		1, 112		151		518
Mar	151	149	201	838		1, 123	[6] 521	151		516
Apr	152	148	202	844	152	1, 119		151	162	516
May	154	147								513
June	153									

[1] December.
[2] July.
[3] January–June.
[4] October, 1913, January, April, and June, 1914.
[5] April–June.
[6] Quarter ending with month.

TABLE 2.—INDEX NUMBERS OF **COST OF FOOD** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928—Continued

Country	Netherlands	Norway	Poland	Sweden	Switzerland	United Kingdom	South Africa	India	Australia	New Zealand
Number of localities	The Hague	30	Warsaw	49	33	630	9	Bombay	30	25
Computing agency	Municipal administration	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Office of Census and Statistics	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period	1921	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1914		[2] 100	100	[2] 100	[2] 100	[2] 100	100	[2] 100	[2] 100	[2] 100
1915		[2] 123							[2] 131	112
1916		153		[1] 152					[2] 130	119
1917		203							[2] 126	128
1918		271		[2] 258					[2] 131	139
1919		290		[2] 318					[2] 147	146
1920		319		[2] 287					[2] 164	168
1921	100	295		[2] 231	213				[2] 161	164
1922	[1] 76	231		[2] 178	163	[2] 180		[2] 160	[2] 148	142
1923	[1] 78	217		[2] 158	165	[2] 162	[1] 118	[2] 148	[2] 164	143
1924				[2] 155	172					148
June	82	240		[2] 155	170	160	120	147	149	150
Dec.	82	274			175	180	121	156	148	150
1925					169					151
June	87	261		[2] 168	169	166	122	149	155	149
Dec.	79	221	125		167	174	116	151	155	156
1926					160					150
Jan.		216	136	163	165	171	116	151	155	154
Feb.		212	138		163	168	117	150	154	153
Mar.	77	205	124		161	165	118	151	159	152
Apr.		198	109	158	161	159	119	150	163	151
May		195	101		159	158	119	150	163	151
June	80	194	114		159	158	118	152	162	151
July		198	118	156	159	161	117	155	159	149
Aug.		196	122		157	161	117	153	157	149
Sept.	74	193	131		158	162	117	152	155	148
Oct.		191	133	156	160	163	120	153	153	147
Nov.		186	140		159	169	119	152	155	146
Dec.	76	184	142		159	169	117	154	158	149
1927					158					145
Jan.		180	143	155	158	167	116	155	158	148
Feb.		177	144		157	164	117	152	153	146
Mar.	76	173	141		156	162	118	152	151	146
Apr.		169	142	149	156	155	119	151	151	145
May		169	145		156	154	121	150	152	145
June	77	172	146		157	154	120	151	153	145
July		175	143	148	157	159	119	154	152	144
Aug.		175	143		157	156	118	155	155	144
Sept.	77	174	143		159	157	117	151	157	143
Oct.		173	144	154	159	161	119	148	159	143
Nov.		171	149		161	163	119	147	157	144
Dec.	80	171	147		160	163	119	149	155	146
1928:										
Jan.		170	143	152	159	162	119	151	154	147
Feb.		170	138		158	159	118	146	152	145
Mar.	82	171	140		157	155	118	142	153	145
Apr.		171	142	152	156	155		140		
May		172	142			154		144		
June						156				

[1] December. [2] July.

TABLE 3.—INDEX NUMBERS OF **COST OF CLOTHING** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913, TO JUNE, 1928

Country	United States	Canada	Belgium	Czecho-slovakia	Den-mark	Finland	France	Germany	Italy
Number of localities	32	60	59	Prague	100+	21	Paris	71	Milan
Computing agency	Bureau of Labor Statistics	Depart-ment of Labor	Ministry of Labor and Industry	Office of Statistics	Depart-ment of Statistics	Central Statis-tical Office	Commis-sion for Study of Cost of Living	Federal Statis-tical Bureau	Munici-pal Ad-minis-tration
Base period	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	1914	1913–14	January-June, 1914
1913	100	100							
1914	[1] 101	[1] 103		[2] 100	[2] 100	[3] 100	100	[4] 100	[3] 100
1915	[1] 105	[1] 115			[2] 110				
1916	[1] 120	[1] 136			[2] 160				
1917	[1] 149	[1] 158			[2] 190				
1918	[1] 205	[1] 185			[2] 260				[2] 284
1919	[1] 269	[1] 210			[2] 310		[3] 296		[2] 221
1920	[1] 259	[1] 232			[2] 355		[5] 485		[2] 692
1921	[1] 184	[1] 177	100		[2] 248	[1] 1107	[5] 353		[2] 512
1922	[1] 172	[1] 162	[2] 99		[2] 217	[1] 1090	[5] 315		610
1923	[1] 176	[1] 164	[2] 113	963	[2] 239	1065	[5] 365	[1] 194	615
1924				964		1039			611
June	174	160	132	959	[2] 267	1034	[6] 420	181	597
Dec	171	159	140	1006		1046	[6] 440	173	667
1925				996		1043			655
June	171	160	142	995	[2] 272	1040	[6] 445	173	665
Dec	169	159	144	995		1043	[6] 510	173	702
1926				988		1042			699
Jan			144	995	230	1043		171	702
Feb			144	995		1043		169	702
Mar		157	144	988		1044	[6] 524	168	702
Apr			145	988		1049		167	702
May			150	988		1049		165	691
June	168	157	155	988		1047	[6] 577	164	692
July			166	988	210	1044		163	692
Aug			172	988		1039		161	692
Sept		157	178	988		1039	[6] 635	160	692
Oct			186	982		1037		160	711
Nov			191	982		1035		158	709
Dec	167	157	199	982		1035	[6] 616	158	709
1927				987		1036			
Jan		157	203	975	196	1035		157	705
Feb		157	207	975		1035		156	705
Mar		157	210	975		1035	[6] 565	156	705
Apr		154	212	975	193	1035		156	705
May		154	213	975		1035		156	643
June	165	154	215	975		1035	[6] 565	156	616
July		154	217	975	192	1035		156	616
Aug		154	219	975		1036		158	597
Sept		155	223	1002		1036	[6] 563	160	597
Oct		155	230	1013	196	1037		162	597
Nov		155	232	1013		1038		164	596
Dec	163	155	234	1013		1038	[6] 581	166	591
1928:									
Jan		155	236	1013	196	1039		167	591
Feb		155	237	1013		1040		168	591
Mar		155	240	1020		1043	[6] 581	169	591
Apr		155	241	1020	198	1043		170	
May									
June	163								

[1] December.
[2] July.
[3] January–June.
[4] October, 1913; January, April, and June, 1914.
[5] April–June.
[6] Quarter ending with month.

TABLE 3.—INDEX NUMBERS OF **COST OF CLOTHING** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO 1928—Continued

Country	Norway	Poland	Sweden	Switzerland	United Kingdom	India	Australia	New Zealand
Number of localities	30	Warsaw	49	33	100	Bombay	6	4
Computing agency	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	July, 1914	November, 1914	July, 1914
1914	[7] 100	100	[2] 100	[2] 100	[2] 100	[3] 100	[8] 100	[2] 100
1915					[2] 125		[8] 105	109
1916			[1] 160		[2] 155		[8] 117	127
1917					[2] 200		[8] 132	156
1918	312		[3] 285		[3] 310		[8] 145	179
1919	[7] 388		[2] 310		[2] 360		[8] 164	216
1920	[7] 336		[2] 390		[2] 430		[8] 181	245
1921	[7] 292		[2] 270	232	[2] 290	[2] 263	[8] 165	226
1922	247		[2] 210	186	239	247	[8] 140	188
1923	230		[2] 196	176	222	214	[8] 136	176
1924	246		[2] 192	179	226	226		168
June			[3] 192	180				
December	257			181		214		
1925				181				164
June	257		[2] 191	182	230	198		[2] 165
December	225	154		179		176		
1926				172	225			155
January		178	190	179	225	173		
February		178		179	225	172		157
March	213	165		179	225	174		
April		134	188	172	223	175		
May		128		172	223	170		156
June	207	145		172	223	162		
July		145	187	172	220	160		
August		146		172	220	160		154
September	200	148		172	220	160		
October		148	184	166	220	159		
November		148		166	218	156		154
December	191	148		166	218	148		
1927				162				149
January		148	182	166	215	143		
February		146		166	215	148		152
March	176	152		166	215	152		
April		152	181	161	215	143		
May		152		161	215	147		149
June	173	152		161	213	147		
July		152	180	161	213	149		
August		159		161	213	152		147
September	172	165		161	213	163		
October		169	181	162	215	163		
November		169		162	215	157		147
December	172	169		162	215	154		
1928:								
January		169	182	162	215	152		
February		169		162	215	153		145
March	169	169		162	218	151		
April		169	184	166	218	153		
May		169			220	155		
June					220			

[1] December. [2] July. [7] June. [8] November.

TABLE 4.—INDEX NUMBERS OF **COST OF FUEL AND LIGHT** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928

Country	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany
Number of localities	32	60	59	Prague	100+	21	Paris	71
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau
Base period	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	1914	1913-14
1913	100	100						
1914	[1] 101	[1] 98		[2] 100	[2] 100	[3] 100	100	[4] 100
1915	[1] 101	[1] 96			[2] 130			
1916	[1] 108	[1] 109			[2] 175			
1917	[1] 124	[1] 125			[2] 220			
1918	[1] 148	[1] 146			[2] 275			
1919	[1] 157	[1] 148			[2] 292		[3] 164	
1920	[1] 195	[1] 200			[2] 563		[5] 296	
1921	[1] 181	[1] 172	100		[2] 401	[1] 1, 249	[5] 308	
1922	[1] 186	[1] 177	[2] 92		[2] 301	[1] 1, 340	[5] 287	
1923	[1] 184	[1] 172	[2] 120	1, 041	[2] 282	1, 477	[5] 317	[1] 177
1924				881		1, 473		
June	177	163	127	861	[3] 298	1, 480	[6] 350	149
December	181	162	127	837		1, 439	[6] 368	137
1925				829		1, 362		
June	177	159	114	830	[3] 252	1, 380	[6] 345	139
December	187	166	114	807		1, 288	[6] 402	142
1926						1, 271		
January			114	807	227	1, 254		143
February			116	807		1, 243		143
March		166	116	805		1, 248	[6] 447	143
April			116	805		1, 248		142
May			118	805		1, 250		140
June	181	162	130	805		1, 254	[6] 452	140
July			144	805	215	1, 238		141
August			163	805		1, 242		141
September		160	168	810		1, 257	[6] 541	143
October			179	814		1, 276		144
November			197	814		1, 349		144
December	188	162	206	814		1, 389	[6] 577	144
1927						1, 405		
January		161	204	814	230	1, 404		145
February		161	197	814		1, 406		145
March		161	189	814		1, 408	[6] 570	145
April		160	184	814	212	1, 409		143
May		159	181	820		1, 405		141
June	181	158	185	820		1, 388	[6] 530	140
July		158	186	820	201	1, 386		142
August		158	184	814		1, 371		143
September		158	184	814		1, 392	[6] 543	145
October		158	182	814	194	1, 403		146
November		158	181	819		1, 439		146
December	183	158	177	819		1, 449	[6] 555	146
1928:								
January		159	176	819	190	1, 440		146
February		159	170	819		1, 430		146
March		159	168	819		1, 438	[6] 547	146
April			168	819	190	1, 436		145
May								
June	177							

[1] December.
[2] July.
[3] January-June.
[4] October, 1913; January, April, and June, 1914.
[5] April-June.
[6] Quarter ending with month.

TABLE 4.—INDEX NUMBERS OF **COST OF FUEL AND LIGHT** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928—Continued

Country	Italy	Norway	Poland	Sweden	Switzerland	United Kingdom	India	New Zealand
Number of localities	Milan	30	Warsaw	49	33	26–30	Bombay	4
Computing agency	Municipal Administration	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Labor Office	Census and Statistics Office
Base period	January–June, 1914	July, 1914	1914	July, 1914	June, 1914	July, 1914	July, 1914	July, 1914
1914	[3] 100	[7] 100	100	[2] 100	[2] 100	[2] 100	[2] 100	[3] 100
1915								101
1916				[1] 168				110
1917								126
1918	[2] 220			[2] 286				136
1919	[2] 220			[2] 326				149
1920	[2] 611			[2] 372		[2] 230		178
1921	[2] 899			[2] 264	213	[2] 260	[2] 176	199
1922	524	301		[2] 188	181	202	168	183
1923	529	282		[2] 185	173	183	163	175
1924				[2] 182	165			174
June	526	322		[2] 182	164	185	166	
December	515	307			161	185	167	
1925	520				153			174
June	518	277		[2] 177	153	180	165	
December	533	232	106		150	180	165	
1926	523				146			177
January	516	232	121	171	149	183	165	
February	505	229	114		148	185	165	176
March	505	227	108		147	185	165	
April	505	225	86	170	146	185	165	
May	505	220	76		145	185	164	176
June	512	218	85		145	190	164	
July	512	214	90	168	145	195	164	
August	512	228	101		144	200	164	177
September	512	238	105		144	213	164	
October	565	257	113	166	145	230	164	
November	565	303	108		146	255	164	177
December	565	279	108		146	250	166	
1927					142			177
January	627	234	111	186	146	215	166	
February	661	224	110		144	210	166	177
March	661	217	108		144	200	166	
April	661	210	108	180	143	190	166	
May	661	203	108		142	185	166	177
June	548	198	106		142	175	166	
July	548	193	107	176	141	170	166	
August	548	189	106		141	170	166	177
September	548	183	108		141	170	166	
October	530	180	111	171	141	170	156	
November	522	179	112		141	170	156	179
December	422	177	113		141	170	156	
1928:								
January	420	177	113	168	139	170	156	
February	409	177	113		139	170	144	179
March	407	176	115		139	170	144	
April		174	116	166	138	168	145	
May		172	120			170	145	
June						168		

[1] December. [2] July [3] January–June. [7] June.

TABLE 5.—INDEX NUMBERS OF **COST OF RENT** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928

Country	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Number of localities	32	60	59	Prague	100+	21	Paris	71	Milan
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Municipal Administration
Base period	1913	1913	1921	July, 1914	July, 1914	January–June, 1914	1914	1913–14	January–June, 1914
1913	100	100							
1914	[1] 100	[1] 97		[2] 100	[2] 100	[3] 100	100	[4] 100	[3] 100
1915	[1] 102	[1] 94			[2] 100				
1916	[1] 102	[1] 95			[2] 102				
1917	[1] 100	[1] 102			[2] 105				
1918	[1] 109	[1] 111			[2] 108				[2] 100
1919	[1] 125	[1] 122			[2] 113		[3] 100		[2] 100
1920	[1] 151	[1] 142			[2] 130		[5] 100		[2] 103
1921	[1] 161	[1] 150	100		[2] 141	[1] 603	[5] 110		[2] 139
1922	[1] 162	[1] 155	[2] 99		[2] 155	[1] 795	[5] 160		202
1923	[1] 167	[1] 158	[2] 134	206	[2] 160	901	[5] 200	[1] 22	234
1924				213		1088			328
June	168	158	140	211	[2] 170	1163	[6] 200	53	307
Dec	168	158	140	222		1165	[6] 200	69	393
1925				236		1224			414
June	167	158	152	233	[2] 178	1266	[6] 200	80	393
Dec	167	158	152	244		1266	[6] 220	89	477
1926						1306			517
Jan			153	250	178	1266		91	477
Feb			153	250		1266		91	477
Mar		158	153	250		1266	[6] 220	91	477
Apr			153	256		1266		97	477
May			154	256		1266		99	477
June	165	156	155	256		1334	[6] 250	100	477
July			158	256	185	1334		104	477
Aug			162	256		1334		105	477
Sept		156	164	256		1334	[6] 250	105	477
Oct			165	256		1334		105	638
Nov			166	256		1334		105	638
Dec	164	156	167	256		1334	[6] 250	105	638
1927						1379			
Jan		156	180	261	185	1334		105	638
Feb		156	181	261		1334		105	638
Mar		156	182	261		1334	[6] 250	105	638
Apr		156	182	261	189	1334		115	638
May		156	182	261		1334		115	638
June	162	156	183	261		1411	[6] 260	115	638
July		156	183	261	189	1411		115	400
Aug		156	183	261		1411		115	400
Sept		156	183	261		1411	[6] 275	115	400
Oct		156	184	261	189	1411		125	400
Nov		156	184	261		1411		125	400
Dec	160	156	184	261		1411	[6] 275	125	400
1928:									
Jan		156	208	261	189	1411		126	400
Feb		156	209	261		1411		126	400
Mar		156	209	261		1411	[6] 275	126	400
Apr		156	209	261	193	1411		126	
May		156							
June	158								

[1] December.
[2] July.
[3] January–June.
[4] October, 1913, January, April, and June, 1914.
[5] April–June.
[6] Quarter ending with month.

TABLE 5.—INDEX NUMBERS OF **COST OF RENT** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO JUNE, 1928—Continued

Country	Norway	Poland	Sweden	Switzerland	United Kingdom	India	Australia	New Zealand
Number of localities	30	Warsaw	49	27	20–30	Bombay	6	25
Computing agency	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	July, 1914	1911	July, 1914
1914	[7] 100	100	[2] 100	[2] 100	[2] 100	[2] 100		[2] 100
1915								101
1916			[1] 108					101
1917								102
1918	111		[2] 112					105
1919	[7] 123		[2] 120					108
1920	[7] 147		[2] 130		118			114
1921	[7] 161		[2] 155	138	145	[2] 165	141	126
1922	171		[2] 163	146	153	165	149	136
1923	173		[2] 163	150	148	165	155	148
1924	176		[2] 178	155	147	165	162	160
June			[2] 178	154				
December	176			158		172		
1925				162			165	169
June	179		[1] 186	162	147	172		
December	179	41		163	148	172		
1926				166			168	180
January		51	188	163	148	172		
February		51		163	148	172		174
March	179	47		163	148	172		
April		41	188	163	148	172		
May		36		167	149	172		178
June	179	40		167	149	172		
July		43	188	167	150	172		
August		44		167	150	172		182
September	179	44		167	150	172		
October		44	188	167	150	172		
November		44		167	150	172		184
December	179	44		167	150	172		
1927				172			168	187
January		53	188	167	151	172		
February		53		167	151	172		185
March	181	53		167	151	172		
April		57	198	167	151	172		
May		57		174	151	172		187
June	181	57		174	151	172		
July		46	198	174	151	172		
August		46		174	151	172		189
September	181	46		174	151	172		
October		49	198	174	151	172		
November		49		174	151	172		189
December	181	49		174	151	172		
1928								
January		53	198	174	151	172		
February		53		174	151	172		188
March	179	53		174	151	172		
April		56	199	174	151	172		
May		56			151	172		
June					151			

[1] December. [2] July. [7] June.

A New Consumers' Guide in Purchasing

AN ATTEMPT is being made to initiate "a better mode of purchasing for the great army of consumers." A club has been formed under the technical direction of Stuart Chase and F. J. Schlink, co-authors of "Your Money's Worth," the purpose of which is to make available, to the ordinary consumer who buys at retail, information such as is now available only to the Federal Government, State, and municipal agencies, and large firms which make their purchases under precise quality or performance specifications. The small consumer "must buy without knowledge of quality, risking inferior goods if he tries to buy cheaply, often paying exorbitantly if he seeks the best, and frequently not getting the best however much he pays."

To meet this situation the club is publishing a list of commodities, giving the names of the goods by brand. They are entered in two columns, "one giving those which represent, in the opinion of certain testing agencies and technical experts, good value at their price. In a parallel column appear commodities, also by name, which are not recommended, either because they cost too much, quality considered; or because they are not so suitable as other commodities in the same field; or are flagrantly misadvertised, or because the manufacturer does not give good service in replacing or repairing defective goods." Supplements to the list will be issued from time to time. The list as now published covers 30 mimeographed pages.

It is felt that the plan "has in it the germ of a practical means for defending the consumer against the forces of supersalesmanship which so often harass and beguile him."

The dues of the Consumers' Club, whose headquarters are at 2 West Forty-third Street, New York City, are $2 a year. This fee will be used "to cover laboratory and clerical expenses. No portion will accrue to any individual. Whatever is received beyond the actual cost of preparing and circulating the list will be turned into a trust fund and used to carry on tests, conduct correspondence with laboratories and with manufacturers, and in other ways to extend and amplify the list and keep its information up to date."

New Budget Study Urged by Railway Clerks' Union [1]

AT A recent meeting of the Western Association of System Boards of Adjustment of the Brotherhood of Railway Clerks, held in St. Louis, a resolution was unanimously adopted recommending that the United States Bureau of Labor Statistics make a new cost-of-living budget study. The resolution in full was as follows:

Whereas, the proper maintenance and operation of the Bureau of Labor Statistics of the United States Department of Labor makes it essential that increased funds be made available for that bureau, and

Whereas, there is an especial need for a new study of living costs and standards of American workers; Therefore be it

Resolved, That our brotherhood take appropriate action to assist the department in securing such appropriation and ask the active cooperation of other standard railroad labor organizations to the same end; and be it further

Resolved, That proper representative of our brotherhood consult with Mr. James J. Davis, Secretary of Labor, and ascertain in what manner other assistance might be rendered in arriving at some more reasonable and more accurate measurements of living costs and standards of American workers.

[1] Letter of June 12, 1928.

LABOR AGREEMENTS, AWARDS, AND DECISIONS

Awards and Decisions

Railroad Telegraphers—Baltimore & Ohio R. R. Co.

The question of relief and vacation with pay for telegraphers on the Baltimore & Ohio Railroad was decided June 6, 1928, by a board of arbitration consisting of E. W. Scheer representing the railroad, J. F. Miller representing the telegraphers, and F. H. Kreismann appointed by the Board of Mediation.

Employees requested an increase of six cents per hour for hourly rated employees and an increase of 10 per cent for monthly rated employees; also the establishment of a rule reading:

(a) All regular assigned employees working 7 days per week will be assigned one regular day off duty every two weeks, without loss of compensation, and if such employees are required to work on their regular relief day, they will be compensated for an additional day at the rate of time and one-half.

(b) All regular assigned employees who have been in the service one year, working an assignment of 6 days per week, shall have 15 days' annual leave with pay, or in lieu thereof 15 days additional pay.

After conducting hearings on the subject, the board denied the requests made by the telegraphers in paragraphs (a) and (b) and granted an increase in pay of about half what was asked for, as follows:

(1) The rates of pay shall be increased an amount equivalent to 3.25 cents per hour per position for hourly rated employees and 5 per cent for monthly rated employees, which shall be distributed to the various employees in such manner as may be agreed upon between the management and representatives of the employees.

In case the management of the railroad and the representatives of the employees are unable to agree on the apportionment of the increases, the items in dispute shall be referred to this board or to a subcommittee of this board, as provided in the railway labor act.

Mr. Miller, representing the telegraphers, filed a long dissenting opinion stating that the wage increases on the Baltimore & Ohio had lagged behind those on other roads in eastern territory; that the present rate was below the average rate whereas in 1917 it was above that rate; "that there are a less number of employees handling a greater volume of business and assuming more responsibilities for which they should be more liberally rewarded"; and that the men suffered a reduction in pay in 1921 because of a recession in business and now ought to receive an increase in pay due to the increase in business.

Continuing, the dissenting arbitrator said:

The allowance of relief with pay was a well-established practice in effect prior to the World War. This had been established by direct negotiations, mediation, and by boards of arbitration, and it had been in effect in varying degrees on the Baltimore & Ohio since 1903. During this time rules were in effect fixing the number of hours constituting a days' work; allowance of overtime at punitive rates for time worked in excess of regular hours; additional compensation for other duties, and during the last years the vacation rules applied to the employees

working eight-hour tricks. In addition to this the employees were enjoying the benefits of a 26-day month at the time the vacation rule was abolished as a war measure.

The employees claim that the Baltimore & Ohio Railroad grants vacations with pay to agents holding positions not listed in the telegraphers' wage scale, to managers of relay offices not listed in the wage schedule, to all officers and employees holding positions not amenable to the railway labor act. This is, in my opinion, plainly preferential treatment to other employees in the service of the Baltimore & Ohio Railroad as well as certain employees of other carriers in the United States.

The practice of granting vacations with pay is well established in the life of the State and Nation as has been substantiated by exhibits filed by representatives of the employees, and this practice is also in effect in outside industries.

By the action of the majority of this board of arbitration, employees in the service of the Baltimore & Ohio Railroad involved in this arbitration award have been denied relief with pay, which, in my opinion, will be detrimental to the health and happiness of the employees and to their families, and it will be reflected in their service to the carrier, making it more difficult for them to render the degree of courteous service demanded by the public and for which the Baltimore & Ohio is widely advertised.

IMMIGRATION AND EMIGRATION

Statistics of Immigration for May, 1928

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

THE monthly statistics for May, 1928, show a decrease in the inward movement of both aliens and citizens and an increase in the outward movement of aliens and citizens, as compared with the figures for the previous month. In May, 43,972 aliens were admitted to the United States and 28,407 American citizens returned, as against 48,691 and 32,586, respectively, for April. Aliens departing for foreign countries in May numbered 25,512 and citizens 34,993, while during April, 17,068 aliens and 29,506 citizens left the country.

During May, 1,601 aliens were refused admission to the United States, 1,376 having been turned back at points along the Canadian and Mexican borders and 225 at the seaports of entry. The principal cause for debarment was failure to present proper immigration visas, 1,461 having been debarred for this reason, while 42 were sent back because of mental or physical defects, 66 as likely to become a public charge, 10 were of the criminal and immoral classes, and 22 for other causes. Aliens deported this month after having entered the country numbered 766, making a total of 10,316 deports for the 11 months of the current fiscal year.

Of the aliens admitted during May, 26,158 were classified as immigrants and 17,814 as nonimmigrants. The principal nationalities or races represented were the Mexican (4,966), German (4,756), Irish (3,657), English (2,246), Italian (2,080), Scandinavian (1,901), Scotch (1,642), French (1,290), and Hebrew (1,045). The other races or peoples contributed less than 500 each.

Among the aliens departed in May, 6,240 were emigrants going abroad for intended future permanent residence, and 19,272 were nonemigrants returning to their homes in foreign countries or going abroad for a visit. Of the permanent departures, or emigrants, 931 were Germans, 903 English, 570 Italian, and 439 Scandinavian, these four nationalities comprising over one-third of the total for the month.

A total of 144,470 immigrants charged to the quota were admitted during the 11 months ended May 31, 1928, or 88 per cent of the annual quota of 164,667, as compared with 151,393, or 92 per cent, during the same months of the year 1926–27. Fourteen countries have exhausted their annual quota for the present fiscal year 1927–28. Greece reached its maximum in December last, Latvia and Luxemburg in April, and Albania, Austria, Belgium, Bulgaria, Estonia, Hungary, the Irish Free State, Lithuania, New Zealand, Spain, and Yugoslavia in May. Fourteen of the smaller countries with an annual quota of 100 each have not as yet sent a single immigrant charged to the quota for this year.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1927, TO MAY 31, 1928

Period	Inward					Aliens debarred from entering [1]	Outward					Aliens deported after landing [2]
	Aliens admitted			United States citizens arrived	Total		Aliens deported			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant [2]	Non-emigrant [2]	Total [2]			
1927												
July	23,420	15,973	39,393	29,935	69,328	2,002	9,230	18,509	27,739	65,686	93,425	700
August	28,418	19,011	47,429	57,701	105,130	1,574	6,322	17,014	23,336	43,039	66,375	1,346
September	31,000	25,619	56,619	75,557	132,176	1,600	7,625	16,885	24,510	39,748	64,258	901
October	31,719	21,578	53,297	50,254	103,551	1,567	6,402	16,424	22,826	24,396	47,222	932
November	27,758	13,841	41,599	24,325	65,924	1,723	5,871	16,886	22,757	22,612	45,369	1,030
December	22,350	10,452	32,802	18,922	51,724	1,679	9,085	21,418	30,503	25,209	55,712	999
1928												
January	18,146	8,579	26,725	19,909	46,634	1,348	5,323	15,632	20,955	27,126	48,081	808
February	20,888	10,393	31,281	31,941	63,222	1,390	4,708	10,070	14,778	34,810	49,588	933
March	26,270	14,348	40,618	34,217	74,835	1,569	4,931	12,242	17,173	29,422	46,595	950
April	30,709	17,982	48,691	32,586	81,277	1,346	4,515	12,553	17,068	29,506	46,574	951
May	26,158	17,814	43,972	28,407	72,379	1,601	6,240	19,272	25,512	34,993	60,505	766
Total	286,836	175,590	462,426	403,754	866,180	17,399	70,252	176,905	247,157	376,547	623,704	10,316

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

CALIFORNIA.—Industrial Accident Commission. *Report of decisions for the year 1926. Vol. 13. Sacramento, 1927. 302 pp.*

ILLINOIS.—Department of Labor. *Ninth annual report, July 1, 1925, to June 30, 1926. Springfield, [1927]. 111 pp.; map, charts, illus.*

Data on workmen's compensation taken from the above report are published on page 66 of this issue.

NEW YORK.—Department of Labor. *Special bulletin No. 155: New York labor laws enacted in 1928. Prepared by Bureau of Statistics and Information. Albany, 1928. 63 pp.*

—— —— State Insurance Fund. *Progress and development of the State Insurance Fund. New York City, 432 Fourth Avenue, 1927. 22 pp. (Extract from annual report of the Industrial Commissioner for fiscal year ended June 30, 1927.)*

Reviewed on page 67 of this issue.

OKLAHOMA.—Industrial Commission. *Twelfth annual report, September 1, 1926, to August 31, 1927. [Oklahoma City, 1927?] 93 pp.*

Data on workmen's compensation taken from the above report are published on page 67 of this issue.

OREGON.—Bureau of Labor. *Electrical code: Rules covering installation of wires and electrical equipment. Salem, 1928. 135 pp.*

A copy of the rules of the United States Bureau of Standards relating to the installation of electrical wires and equipment to convey current and of electrical apparatus to be operated by such current so far as they cover both fire and personal accident hazards. Includes an illustrated section covering resuscitation rules.

VIRGINIA.—Industrial Commission. *Biennial report, for the years ending September 30, 1926, and September 30, 1927. Richmond, 1928. 13 pp.*

Reviewed on page 68 of this issue.

WYOMING.—Workmen's Compensation Department. *Twelfth report, January 1 to December 31, 1927; second report, Coal Mine Catastrophe Insurance Premium Fund, April 1, 1925, to December 31, 1927; fifth report, Wyoming Peace Officers' Indemnity Fund, January 1 to December 31, 1927. Cheyenne, 1928. 151 pp.*

Data on workmen's compensation taken from this volume are published on page 68 of this issue.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Technical paper 422: Prevention of pipe-tool accidents at drilling and producing wells, by H. C. Fowler. Washington, 1928. 47 pp., illus.*

Reviewed on page 54 of this issue.

—— —— —— *Technical paper 437: Coke-oven accidents in the United States during the calendar year 1926, by William W. Adams. Washington, 1927. 40 pp.*

Reviewed on page 48 of this issue.

UNITED STATES.—Department of Labor. Children's Bureau. *Bureau publication No. 182: Welfare of prisoners' families in Kentucky, by Ruth S. Bloodgood. Washington, 1928. 50 pp.*

Report of a study made to ascertain the social and economic effects of the fathers' imprisonment upon the welfare of mothers and children in the families of prisoners in the two State penal institutions of Kentucky. The study was made by the Children's Bureau on request of a commission appointed by the Governor of Kentucky to study the labor system in the State reformatory and the State penitentiary, and represents one phase of the general inquiry into the prison labor problem.

Official—Foreign Countries

AUSTRALIA.—Department of Health. Division of Industrial Hygiene. *Service publication No. 5: Report on an investigation of the pulmonary conditions of mine employees, Western Australia, during the years 1925–1926, by W. T. Nelson, M. D. Canberra [1927?]. 99 pp.; illustrations, diagrams.*

Reviewed on page 64 of this issue.

BELGIUM.—Ministère de l'Industrie, du Travail, et de la Prévoyance Sociale. Direction Générale du Travail. *Enquête sur la situation des industries (établissements de 10 ouvriers et plus) 31 Octobre 1926. Vol. I. Brussels, 1927. 473 pp.*

This report contains a census of employees in Belgian undertakings in which 10 or more workers are employed. The workers are classified, by age, according to industry and place of employment.

CANADA (BRITISH COLUMBIA).—Workmen's Compensation Board. *Eleventh annual report, for the year ended December 31, 1927. Victoria, 1928. 31 pp.*

Figures from the above report are given on page 69 of this issue.

——— (ONTARIO).—Workmen's Compensation Board. *Report for 1927. Toronto, 1928. 76 pp.*

Figures from the above report are given on page 70 of this issue.

DENMARK.—Ministère de l'Interieur. *Legislation sociale en Danemark, par Erik Dreyer. Copenhagen, 1928. 46 pp. (In French.)*

A discussion of social legislation in Denmark.

ESTONIA.—Bureau Central de Statistique. *Situation financière des sociétés anonymes et des sociétés coopératives au Janvier 1, 1926. Tallinn, 1927. 34 pp.*

Financial statistics of cooperative societies as of January 1, 1926. Tables are in Estonian and French.

FRANCE.—Ministère du Travail, de l'Hygiène, de l'Assistance et de la Prévoyance Sociales. Statistique Générale de la France. *Statistique annuelle des institutions d'assistance, 1925. Paris, 1928. lvi, 69 pp.*

This report of the French Statistical Office covers the operations of the various institutions which provide assistance in case of old age and invalidity and to women and children, and the work of public health hospitals and hospitals for the insane.

GERMANY.—Statistisches Reichsamt. *Die Tarifverträge im Deutschen Reiche am 1. Januar 1927, nebst einem anhang—Die Reichstarifverträge am 1. Januar 1928. Berlin, 1928. 16*, 48 pp. (43 Sonderheft zum Reichsarbeitsblatt.)*

A statistical presentation of collective agreements in Germany as of January 1, 1927, with supplementary data for 1928.

GREAT BRITAIN.—Board of Trade. *Statistical abstract for the United Kingdom for each of the 15 years from 1912 to 1926. London, 1928. 375 pp. (Cmd. 3084.)*

Includes data on health insurance, old-age pensions, unemployment and unemployment insurance, profit-sharing, trade-unions, strikes and lockouts, cost of living, wages, industrial accidents, and workmen's compensation.

GREAT BRITAIN.—Industrial Fatigue Research Board. *Eighth annual report, to December 31, 1927. London, 1928. 36 pp.*

This report contains a brief review of the investigations carried on by the board during 1927, among which were studies of hours of labor, physiology of ventilation, vision and lighting, accident causation, absenteeism due to sickness, repetitive work, sickness in the textile and printing industries, atmospheric conditions in mines, and special laboratory researches on muscular activity and effort, transfer of skill, and effects of noise and vibration.

—— —— *The physique of women in industry. A contribution toward the determination of the optimum load. London, 1927. vi, 137 pp.*

A digest of this report is given on page 61 of this issue.

—— Mines Department. Safety in Mines Research Board. *Sixth annual report, including a report of matters dealt with by the Health Advisory Committee, 1927. London, 1928. 55 pp.*

This report contains brief accounts of the progress of the safety researches undertaken during 1927, including a statement of the studies carried on in cooperation with the United States Bureau of Mines.

—— Registry of Friendly Societies. *Report for the year 1927. Part 5: Building societies. London, 1928. 53 pp.*

The data of the report, which are not carried beyond 1926, show a rapid increase in the growth and effectiveness of the societies since 1918. From 1922 to 1926 the membership increased from 926,032 to 1,257,400, the advances made rose from £22,707,799 to £52,150,941, and receipts from £52,628,709 to £93,400,588.

INTERNATIONAL LABOR OFFICE.—*Studies and reports, series K (agriculture), No. 8; The representation and organization of agricultural workers. Geneva, 1928. 210 pp.*

Part 1 of the report deals with the representation of agricultural workers in the International Labor Organization; part 2 discusses the question of what constitutes an agricultural worker; and part 3 contains information on land holdings, occupational classifications of workers and trade-union organization, in various foreign countries.

LEAGUE OF NATIONS.—Health organization. *International health yearbook, 1927 (third year). Reports on the public health progress of 27 countries in 1926. Geneva, 1927. 802 pp.*

This report contains a section on industrial hygiene in Germany, Belgium, and Great Britain (pp. 723–739).

NEW ZEALAND.—Census and Statistics Office. *The New Zealand official year book, 1928. Wellington, 1927. 973 pp.; maps, charts.*

In addition to general information regarding New Zealand and its affairs, the volume contains statistics on the following subjects of interest to labor: Wages and hours of labor, prices, employment, trade-unions, industrial disputes, labor legislation, industrial accidents, pensions of various kinds, and workmen's compensation.

RUMANIA.—Ministère de l'Industrie et du Commerce. Institut de Statistique Générale de l'État. *Annuaire statistique de la Roumanie, 1926. Bucharest, 1927. 375 pp.*

This statistical annual includes data on prices of certain articles of consumption in Bucharest in 1926, production in various industries in 1926 compared with earlier periods, social insurance, strikes and lockouts, collective agreements, employment offices, and cooperative societies.

SCOTLAND.—Board of Health. *Ninth annual report, 1927. Edinburgh, 1928. 391 pp. (Cmd. 3112.)*

Data relating to widows', orphans', and old-age contributory pensions, taken from this report, are given on page 85 of this issue.

SPAIN.—Ministerio de Trabajo, Comercio, e Industria. Servicio General de Estadística. *Anuario estadístico de España, 1925–26. Madrid, 1927. xxvii, 689 pp.*

In addition to data relating to population, production, agriculture, commerce, etc., this statistical yearbook contains tables showing index numbers of food prices, wages, strikes, and industrial accidents in Spain.

URUGUAY.—Dirección General de Estadistica. *Anuario estadístico de la República oriental del Uruguay, 1926. Tomo XXXV, Parte 6. Montevideo, 1928. [80 pp.]*

One section of the statistical yearbook of Uruguay containing data on industrial accidents and other subjects of interest to labor. Figures on strikes from 1920 to 1926 appear on page 119 of this issue.

Unofficial

ALL-INDIA TRADE-UNION CONGRESS. *Eighth session, Cawnpore, 1927. Report and congress constitution. Bombay, 1928. 151 pp.*

Speeches delivered at this session traced the growth of the trade-union movement in India and dwelt upon the unfortunate conditions which need redress. Strong complaint was made of the system under which fines imposed by the employer upon the worker are deducted from the employee's wages, and the Government was called upon to take action in regard to this practice. Resolutions were passed calling for the eight-hour day and the 44-hour week, machinery for fixing minimum wages, sickness and unemployment insurance, old-age pensions and pensions for widows and orphans, maternity benefits, and the weekly payment of wages.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN. Tulsa (Okla.) Branch. *Tulsa children engaged in street trades. [Tulsa, 1928?] 34 pp.*

A study of the different kinds of street workers and their working conditions, home environment, and school attendance and scholastic standing, based upon the findings of 829 questionnaires taken in individual interviews with working children under 16 years of age, and upon 124 personal visits to homes. The children studied were acting as newspaper carriers, street sellers, bill peddlers, magazine sellers and carriers, stand tenders, merchandise sellers in residence districts, and junk collectors. The survey was made under the direction of the United States Children's Bureau.

AMERICAN MANAGEMENT ASSOCIATION. *Office executives series, No. 30: Office working conditions and extra compensation plans, by H. J. Taylor. New York, 20 Vesey Street, 1928. 28 pp.*

Reviewed on page 34 of this issue.

CABALLERO, FRANCISCO LARGO. *Presente y futuro de la Unión General de Trabajadores de España. Madrid, J. M. Pedreño [1925]. 253 pp.*

This report gives a comprehensive account of the developments and activities of the General Union of Workers of Spain (*Unión General de Trabajadores*) from its first congress held in Barcelona in August, 1882, up to the present time. A description is given of its policies in the past as well as those outlined for the future.

COLEMAN, LAURENCE VAIL. *Contributions of museums to outdoor recreation. Washington, 1928. 45 pp.*

One of the studies planned by the National Conference on Outdoor Recreation. This study is designed to show "what contributions can be made by the natural history museums of the country in the field of outdoor recreation and conservation through teaching of understanding and love of nature."

FEIS, HERBERT. *Labor relations: A study made in the Procter & Gamble Co. New York, Adelphi Co., 1928. 170 pp.*

An intensive study was made by the writer of the working out of the policies of the company in the field of industrial relations. An account is given of the operations and the growth and financial development of the company, and in addition the profit-sharing and pension and benefit plans, the guaranty of employment plan, suggestion system, and other personnel policies are subjected to critical examination. The personnel policies are also considered in relation to wages and hours of labor and other working conditions.

HAMILTON, WALTON H., and WRIGHT, HELEN R. *A way of order for bituminous coal. New York, Macmillan Co., 1928. 365 pp. (Publication of the Institute of Economics.)*

HAVERHILL (MASS.) PUBLIC LIBRARY. *Settling labor disputes: A working laboratory of books in the Haverhill Public Library. Haverhill, 1928. 22 pp.*

A descriptive list of books and magazine articles dealing with various phases of the relations between labor and capital.

HOMAN, PAUL T. *Contemporary economic thought. New York, Harper & Bros., 1928. 475 pp.*

INDUSTRIAL SAFETY CONGRESS, London. *Report of proceedings, March 20, 1928. London, 1928. 59 pp.*

Report of a session of the Congress, organized jointly by the Home Office and the National Safety First Association, to discuss accident prevention.

INFORMATION BUREAU ON WOMEN'S WORK. *Wage rates, earnings, and fluctuation of employment, Ohio, 1914–1926 (inclusive). Toledo, 305 Commerce Guardian Building [1928?]. 140 pp.; charts.*

The report shows that during the 13-year period 1914 to 1926 the proportion of women in the total group of wage earners in Ohio increased from 14.07 to 15.54 per cent, while there was a slight decrease in the percentage of male wage earners—from 83.84 to 83; the per cent of employed children was 2.09 in 1914 and 1.46 in 1926. In clerical work, the percentage of woman workers increased from 39.40 to 49.75, while that of men decreased from 57.04 to 48.88 and that of children from 3.56 to 1.37. In the sales group the per cent of women decreased from 53.36 to 41.41 and of children from 2.23 to 1.85; the proportion of men increased from 44.41 to 56.73 per cent.

INSTITUTE FOR GOVERNMENT RESEARCH. *The problem of Indian administration: Report of a survey made at the request of Hon. Hubert Work, Secretary of the Interior, and submitted to him, February 21, 1928. Baltimore, Johns Hopkins Press, 1928. 872 pp.*

A comprehensive study of methods followed in the administration of Indian affairs, with criticisms and suggestions for improvement. The volume includes chapters on health, education, and social and economic conditions of the Indians.

INSTITUTE OF PACIFIC RELATIONS. *Problems of the Pacific. Proceedings of the second conference of the Institute of Pacific Relations, Honolulu, Hawaii, July 15 to 29, 1927. Edited by J. B. Condliffe. Chicago, University of Chicago Press, 1928. 630 pp.; maps, charts.*

Among the subjects of discussion at this important meeting were industrialization and foreign investment, the industrialization of China, the labor movement in China, land utilization in China, and population and the food supply.

INTERNATIONAL UNION OF WOODWORKERS. *Bulletin, February–March, 1928: Labor sufferings in dark tropical forests: The plight of the lumber workers in Argentina, Brazil, and the Dutch East Indies. Amsterdam, Holland, 1928. 16 pp.; map, illustrations.*

A discussion of the economic and social conditions of lumber workers in the countries mentioned, based on material collected by the International Union of Woodworkers.

INTERNATIONALER UNION DER LEBENSMITTELARBEITER. *Die Löhne der Lebensmittelarbeiter in den verschiedenen Ländern am 1. August, 1927. Zurich, 1927. 19 pp.*

This report of the International Union of Workers in the Food and Drink Trades contains comparative data on wages in those trades in various countries.

NATIONAL BUREAU OF CASUALTY AND SURETY UNDERWRITERS. *Educational Series, Vol. III: Safety education in the vocational school. The construction of a curriculum for accident prevention, by Max S. Henig. New York, 1928. 110 pp.; charts.*

Reviewed on page 52 of this issue.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *Employee stock purchase plans in the United States. New York, 247 Park Avenue, 1928. 245 pp.*

Reviewed on page 99 of this issue.

NATIONAL SAFETY COUNCIL. *Public safety series No. 17: Accident facts, 1928 Chicago, 108 East Ohio Street, 1928. 45 pp.; charts.*

Estimates a total of 95,500 deaths caused by accidents in the United States in 1927, an increase of about 4 per cent over 1926. Data are compiled from sources including the council itself, insurance companies, State reports, United States Bureau of the Census, city and county departments, Interstate Commerce Commission, and other sources. The statistics are classified under four heads: All accidents, public accidents, home accidents, and industrial accidents. Death rates per 100,000 of population are not computed for 1927, but for 1926 the total rate was 78.6 as compared with 84.7 in 1911, all of which decrease, it is stated, occurred prior to 1921. Automobile accidents resulting in death (not including collisions with railroad and street cars) show a fatality rate of 17.9 in 1926, as compared with 2.2 in 1911. The next highest specific cause of death was falls, with a death rate of 14 in 1926 and 15 in 1911. Most of the report is devoted to public accidents.

PRINCETON UNIVERSITY. Industrial Relations Section. *Reduction of absence and tardiness. Princeton, N. J., [1927?] 25 pp. (Mimeographed.)*

This study covers the various methods used by industrial establishments to reduce absenteeism and tardiness, such as bonuses, extra vacation allowances, promotion, etc. The plans of various companies are described. A short bibliography is appended.

REGIONAL PLAN OF NEW YORK AND ITS ENVIRONS. *Engineering series. Monograph No. 2: The transit and transportation problem, by Harold M. Lewis. New York, 130 East 22d Street, 1926. 129 pp.; maps, charts.*

—— —— *Monograph No. 3: Land values—distribution within New York region and relation to various factors in urban growth, by Harold M. Lewis and others. New York, 130 East 22d Street, 1927. 72 pp.; maps, charts.*

These two studies are part of the general survey which is being made of New York and its environs to examine the growth and physical needs of Manhattan and the region within 50 miles of the city for the purpose of providing a foundation for the increase of population and industry.

—— *Planning the New York region. An outline of the organization, scope, and progress of the regional plan, by Thomas Adams, with a summary of studies made up to September, 1926, and a report of meetings held on May 25, 1926. New York, 130 East 22d Street, 1927. 129 pp.; maps, illustrations.*

ROSS, EDWARD ALSWORTH. *Standing room only? New York, The Century Co., 1927. 368 pp.*

A discussion of population as a world problem.

ROYAL ECONOMIC SOCIETY. *Memorandum No. 8: Output, employment, and wages in industry in the United Kingdom, 1924, by G. L. Schwartz. London, 1928. 14 pp.*

A study based upon the preliminary reports of the third census of production, the unemployment insurance statistics published in the Ministry of Labor Gazette, and the returns of an inquiry into earnings and hours of workpeople in 1924 in Great Britain and Northern Ireland.

WOOD, CLEMENT, AND COLEMAN, MCALISTER. *Don't tread on me: A study of aggresive legal tactics for labor. New York, Vanguard Press, 1928. 135 pp.*

WRIGHT, WADE., M. D. *The health of office workers. New York, Metropolitan Life Insurance Co. [1927?]. 35 pp. (Reprinted from proceedings of convention of the Life Office Management Association, Atlantic City, October 6-8, 1927.)*

Reviewed on page 58 of this issue.